Clinical Medicine and Surgery
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The American Journal of

CLINICAL MEDICINE

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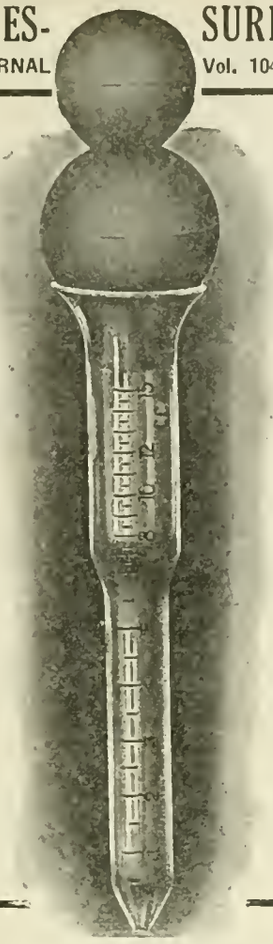

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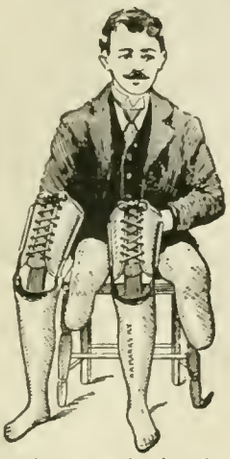

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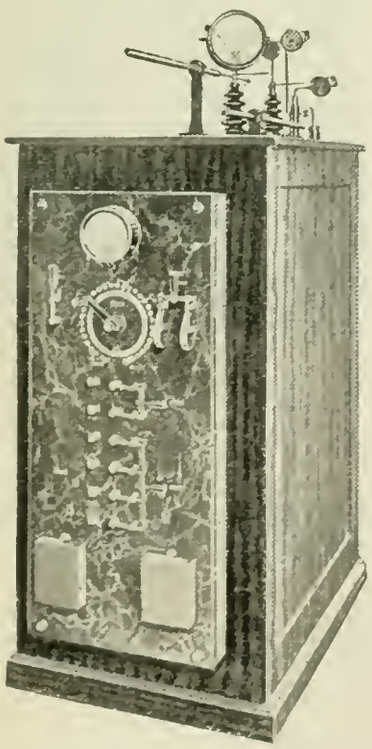

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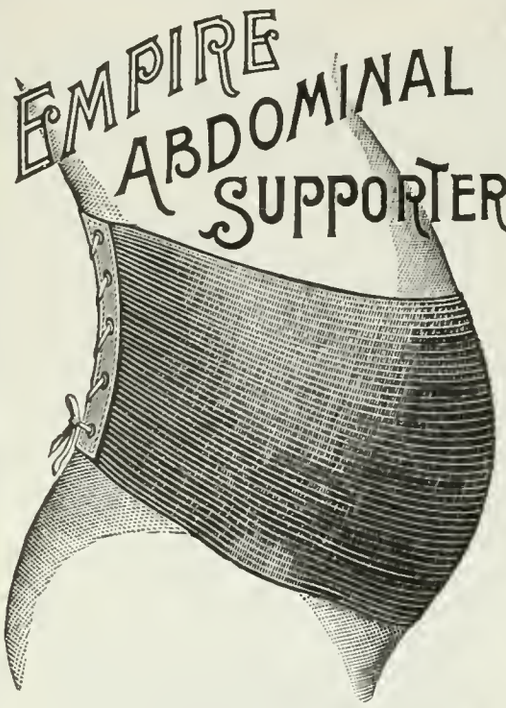

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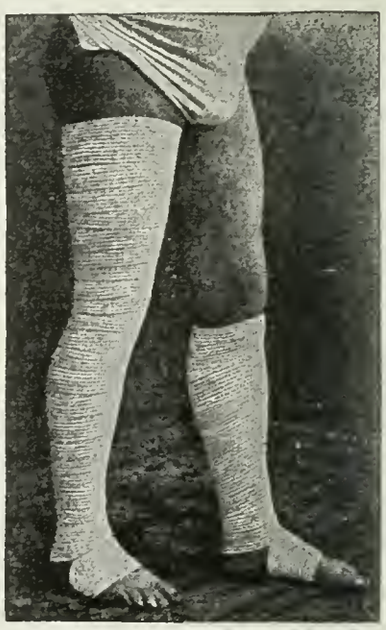

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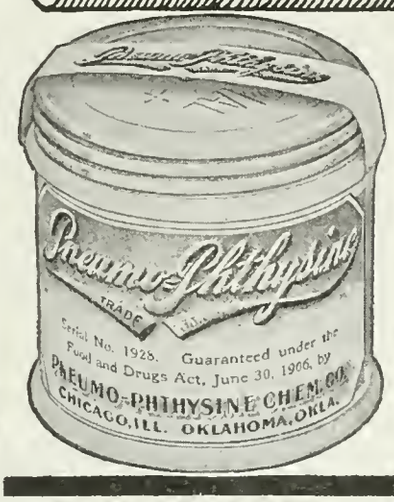
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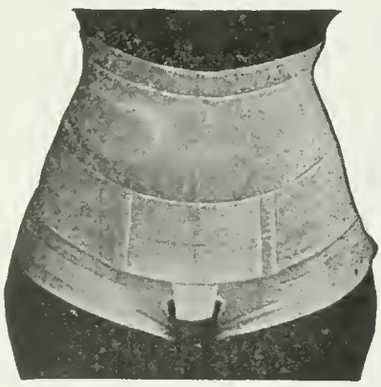

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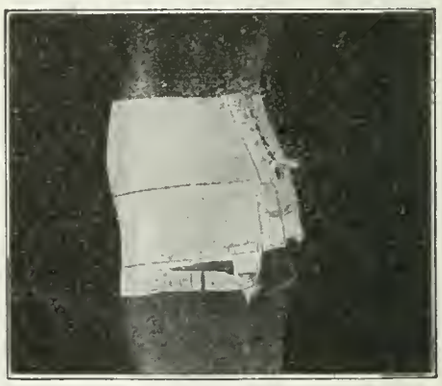

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And how it flies to-day
In your land and my land
And half a world away!
Rose-red and blood-red
The stripes forever gleam;
Snow-white and soul-white—
The good forefathers' dream;
Sky-blue and true blue, with stars to gleam aright—
The gloried guidon of the day; a shelter through the night.

Your flag and my flag!
To every star and stripe
The drums beat as hearts beat
And fifers shrilly pipe!
Your flag and my flag—
A blessing in the sky;
Your hope and my hope—
It never hid a lie!
Home land and far land and half the world around,
Old Glory hears our glad salute and ripples to the sound!

Your flag and my flag!
And, oh, how much it holds—
Your land and my land—
Secure within its folds!
Your heart and my heart
Beat quicker at the sight;
Sun-kissed and wind-tossed—
Red and blue and white.
The one flag—the great flag—the flag for me and you—
Glorified all else beside—the red and white and blue!

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The American Journal of
CLINICAL MEDICINE
Dependable Therapeutic Fact for Daily Use

Vol. 24. No. 4 APRIL, 1917

Single Remedies Versus Combinations

ON MORE than one occasion, we have expressed our personal preference for the prescribing of single remedies in contradistinction to the combinations so generally employed. In this, we are neither the first nor alone. Every clinician who becomes interested in the study of drug action is soon forced to the single remedy. The great physiologic experimenters who established our materia medica on an approximation of a scientific basis, in place of the purely empiric one of our fathers, were forced to the single remedy and the single active principle, in order to secure any results worthy the pains. No possible results could be obtained from experimental observations with a drug such as hyoscyamus, which might exhibit almost absolutely opposite effects, as the hyoscyamine and hyoscine happened to be in excess.

Shotgun prescribing arose from confused knowledge as to the pathologic conditions and the powers of drugs. From ancient days, we inherited such amazing mixtures as Warburg's tincture, in which, one almost might say, most of the known vegetable drugs were thrown together heterogeneously. It illustrates the continuing ignorance of the profession, as a body, that the use of this relic of medieval days persisted almost to the present century. Nevertheless, there always has been an apparent effort toward simplicity. Thus, Cullen urged the single remedy. The followers of Hahnemann claimed, with unanswerable logic, that one remedy for one indication was enough, provided that one be the right one. Trousseau startled the timid when he treated epilepsy with just one remedy—strychnine—pushed to a dosage for effect that has rarely been repeated. Every modern student of drug action shows the growing tendency toward this simplicity.

In this, therapeutics has followed pathology. As we learned to recognize deviations from the normal functions of the body, we also sought to apply such remedies as might correct the disorder and restore equilibrium. So, we see the series of chemical hypnotics almost exclusively prescribed alone or only with a mere menstruum.

Certainly, it seems beyond argument that we should thoroughly comprehend all the possibilities of activity in each remedy singly before we attempt combinations of them. And, yet, who can say positively that we have exhausted these possibilities in any one article of our list?

That there are as yet undreamed-of potencies residing in the combinations is apparent. We have frequently directed attention to the remarkable augmentation of activity

that results from the combination of morphine with hyoscine—the sum of the two being far in excess of that of the added powers of the respective drugs. Quite recently we have another illustration of this principle:

Macht, in *The American Journal of the Medical Sciences*, announces the results of a prolonged series of animal-experiments made with morphine and narcophin. The latter consists of a mixture of one part morphine meconate and 2 parts narcotine meconate. The toxicity of narcotine is but slight, yet, the toxicity of the mixture is fully that of an equal weight of pure morphine. The addition of the comparatively innocuous narcotine, therefore, greatly increases the toxicity of the morphine.

There are in use a few combinations so admirably balanced and so well studied by the clinicians that they may safely and usefully be employed as single remedies, without stopping to consider the separate ingredients. Dover's powder is a good example. The Pharmacopeia contains few others of this nature, beside the other mixtures that might well be dropped—and which would be, were it not for the ingrained habit of polypharmic prescribing. Of the alkaloidal list, the dosimetric trinity of Burggraeve, the defervescent compound, and various antispasmodic and anodyne combinations, besides a few others, have proved their right to existence. Of the hundreds of compounds filling the lists of the pill-, granule- and tablet-manufacturers, the ready-made mixtures advertised, nearly all are mere stumbling-blocks to the student of therapeutics and refuges for the lazy prescriber.

To the same observer, Doctor Macht, and his collaborators Johnson and Bollinger (*Jour. Pharm. and Exp. Ther.*, Aug., 1916) we are indebted for the vindication of our old friend lead-water and laudanum. Often denied any therapeutic efficacy whatsoever, barring the little to be expected from the plumbic ingredient, these gentlemen have decided that opiate local applications really do something. The opium alkaloids were found to exert a distinctly measurable action upon the sensory nerve-terminals, producing a slight analgesic effect, and in the order named: papaverine, narcotine, morphine, narceine, codeine, thebaine. Their combined action was greater than that of the content of morphine, papaverine or narcotine as manifested when applied alone.

The importance of this observation is not limited to its demonstration of the truth of a local action by the thebaic alkaloids. It vindicates a clinical conclusion having centuries of experience to back it. It gives new support to our contention that there is a germ of truth behind popular and general beliefs, despite our inability to explain them and the apparent negation afforded by laboratory-experiments. These latter, made upon animals, in a state of health, and applied unreservedly to human beings in various pathologic conditions, have seemed to us as unreasonable as it would be to give food to a man surfeited with it and then to deny that food had the power of relieving hunger.

We shall just go on giving calomel for the train of symptoms we have known as sluggishness of the liver, aconitine for fever, cod-liver oil for pulmonary consumption, the sulphocarbolates as intestinal antiseptics, zinc phosphide for nerve-center degeneration, and a whole lot of other drugs for conditions we have found to yield to these drugs, and wait with equanimity until we are told how and why they cure. We know they do; and, therefore, we stick to our colors.

At the heart of the cyclone tearing the sky
And flinging the clouds and the towers by,
Is a place of central calm;
So here in the roar of mortal things,
I have a place where my spirit sings,
In the hollow of God's Palm.

NEW FACTS ABOUT HEART DISEASE

In *The New York Medical Journal*, Dr. Charles Lyman Greene makes a plea for a better prognosis in dealing with some cardiac maladies. The pessimism general among the laity and profession recalls that prevailing fifty years ago with respect to pulmonary tuberculosis. Both, representing infections, are measurably preventable. Both tend to become chronic, with slow but inexorable progress if left to themselves. The last few years have seen a notable increase in our means of delaying the progress of cardiac maladies and prolonging the life of the patients. These Doctor Greene enumerates as follows:

1. Definite proof of the bacterial origin of acute rheumatism and syphilis. (2) The nature and extreme value of the subjective symptoms of cardiovascular insufficiency. (3) Establishment of maximum dimensions for the heart and placing proper emphasis upon the relations subsisting between structural type and the size of the heart normal for the individual. (4) Better methods of cardiac percussion. (5) Routine use of the x-ray, to determine the size of the heart, its type,

and changes of contour in various forms of impairment. (6) The discovery that therapeutic doses of digitalis do not affect the normal heart or one fully compensated, or subjective symptoms unrelated to cardiovascular inadequacy. (7) The dilatations or chronic overstrains of the drop-heart, or corpendulum, a type long known anatomically, but almost wholly disregarded as to its important clinical manifestations.

Prevention begins with the recognition of rheumatism and syphilis as the infective causes of cardiac lesions. The causation of the former by a streptococcus almost constantly present in diseased tonsils and frequent in other septic foci, and the vulnerability of the endo- and myocardia to this and other infections are dwelt upon. More careful examinations of the heart, continued during convalescence, would save many lives. Syphilis is most active in the cardiac region during the early secondary, the results manifesting themselves in the late tertiary stage. The Wassermann test is to be trusted only when executed by experienced serologists; the denials of the patient do not count at all.

Long before the evidences of decompensation are manifested, the cardiac patient suffers periods of minor insufficiency that are significant. Gastric discomforts are more likely to be of cardiac origin than the contrary. Cardiovascular pains cover a wide range, and tenderness over the apex and inferior left border of the heart is rather common. Globus, diurnal drowsiness, ready fatigue, susceptibility to cold, and a host of similar vague ailments are attributed by Greene to the earlier stages of heart lesions; but, one should beware of making the association too close. One never mistakes the symptoms in closely investigating the heart, but all of them occur in many cases without there being any cardiovascular disorder. The most important single symptom, in Greene's opinion, is the peculiar cardiac debility manifested when an unusual physical is exertion made.

Modern observations have reduced the dimensions that are supposed to indicate a normal heart, and have introduced better means of percussing than the flat finger. All percussion-strokes should be made at right angles to the anterior plane of the heart. The "dilated and hypertrophied silent heart" is not overlooked now as formerly. The x-ray is deservedly pronounced "invaluable and indispensable."

In the satisfaction following the decided improvement after the use of digitalis, one is liable to overlook the rather ominous prognostic significance. Digitalis does not affect a normal heart.

Cardiac ptosis invariably is associated with similar displacements of other organs and also with a well-recognized general condition, namely, the predisposition to tuberculosis. These persons are usually classed as passive or depressed neurasthenics, or as nervous dyspeptics. This condition is more common in women than in men.

Doctor Greene's conclusions are reproduced in full, as follows:

1. It has now become possible measurably to retard and, to a considerable degree, prevent cardiovascular diseases.

2. It is imperatively necessary, in the interests of the cardiopath and of the race, that a justifiable optimism should replace the almost universal pessimism now existing.

3. A knowledge of the specific bacterial origin of diseases of the heart should be promulgated, together with the means best adapted for the control of causative conditions.

4. Our old ideas with relation to cardiac dimensions should be radically revised and brought into correspondence with the facts as at present definitely established.

5. Modern methods of percussion, accurate and definite, should replace the older practice still in vogue.

6. The cardinal value and importance, together with the nature and diversity, of subjective symptoms of cardiac insufficiency should receive their full value as means of early diagnosis and indicators for therapeutic initiative.

7. The extraordinary usefulness of test doses of digitalis, with or without physical rest, constitutes the very foundation of timely diagnosis.

8. A thorough understanding of the anatomical peculiarities of the drop-heart is essential, because of its association with a definite constitutional state, its remarkable prolixity with respect to symptoms of a most varied and obscure character, together with the misleading narrow diameters present even in dilatation.

9. The common occurrence of the drop-heart, its constant relationship to general visceroptosis of which it is a part, its frequent association with socalled nervous dyspepsia, and the almost universal tendency to lose sight of the true cause of its symptoms, by referring them to the bastard symptom-conglomerate long known as "neurasthenia" are facts of decided clinical importance.

10. The existence of the drop-heart in the male is a matter of great importance with

respect to the fitness of its possessor for hard manual labor and actual service in warfare.

11. An application of those newer discoveries in the cardiovascular field as are here enumerated can not fail to exercise a striking effect both on the prevention of cardiovascular disease and the retardation of established cases.

Practice medicine in faith, hope and charity—faith in your remedial agents, hope in your patient's willingness to pay, and charity for the brother who knocks you.
—Urologic and Cutaneous Review.

THE DANGER OF CONTACT WITH THE DIPHTHERIA-CARRIER

Although the carrier of pathogenic bacilli presents a problem the importance of which is fully appreciated, at least on the part of most health-officials and physicians, it is often assumed that such bacteria as are harbored by healthy persons lose their virulence, because of the specific resistance of their hosts.

Undoubtedly, this holds true in many cases, and it has been found, for instance, that tubercle-bacilli in the nasal passages of clinically healthy persons are only slightly virulent for guinea-pigs or not at all, and the same can be said also for those tubercle-bacilli that persist in the expectoration of clinically recovered tuberculous patients in whom a complete active immunity has been established.

Unfortunately, there is here an instance of the old truth, that one man's meat may be another man's poison. It may occur that a certain person harbors pathogenic bacteria, say, typhoid- or diphtheria-bacilli, which cannot cause him to be ill and to acquire the particular infectious disease, owing to an existing active immunity sufficient to counteract the "taking" of the infection. If, on the other hand, bacteria of the same strain are communicated to other persons and they do not happen to possess an efficient active immunity, the infection of the latter will result in the related infectious disease.

For the case of the diphtheria-carrier, the possibility of this event has become very manifest once more through certain investigations, the results of which have been published by George H. Weaver, of Chicago, in *The Journal of Infectious Diseases* for February, 1917. Weaver examined 14 carriers of diphtheria-bacilli, 3 of whom were nurses on duty in the Durand Hospital. The remaining 11 were admitted to the Memorial Institute for Infectious Diseases as carriers, who usually had been detected as such in routine bacteriologic examinations by the Chicago Health-Department. None of these carriers had had an attack of diphtheria, although some had had slight sore throat or "cold in the head" some days or weeks previously; 3 had had a purulent nasal discharge. An examination of the diphtheria-bacilli in culture from all these carriers proved them to be virulent; nonvirulent diphtheria-bacilli were not found at all.

This result agrees with the conclusion arrived at by, for instance, Graham-Smith, in his book on "The Bacteriology of Diphtheria" (1908), to the effect that in the great majority of cases the diphtheria-bacilli retained their full virulence up to the time of their final disappearance. Consequently, the conclusion of Weaver is fully justified, namely, that carriers should be kept in isolation until the bacilli have been gotten rid of or until the strains cultivated have been proved to be nonvirulent; and, further, that cultures from the nose, as well as from the throat, should be made in all suspected cases.

The importance of this precautionary measure, more particularly for the health of school-children and for the prevention of diphtheria among them, is self-evident and constitutes one of the most important prophylactic duties of physicians and health-officers.

HOSPITALS FACING PUBLIC PARKS

According to a correspondent of *The Journal of the American Medical Association*, the city council of Oakland, California, is considering an ordinance prohibiting the building of a hospital within two hundred feet of a public park. It would, indeed, be interesting to know the origin, and, who are the sponsors, of this ordinance, which is about as asinine a bit of proposed legislation as has come to our cognizance in many a day.

Presumably, it is feared that hospitals in the immediate vicinity of public parks would endanger the health and life of those enjoying themselves in those breathing-spaces of the big city. We hardly can assume that the intention is to protect the patients from annoyance by the noises of playing children or passing vehicles, for, that applies to a far greater degree to hospitals located on busy streets in the heart of the city. Hence, it is a reasonable conclusion that the sponsors of this proposed ordinance fear some deleterious influence from hospitals upon those visiting the parks, more particularly the children. If this be so, it is on a par with, if not worse than, so many other silly legal enactments that

prevent the establishment of, for instance, tuberculosis-sanatoria in virtually any location where people reside, because of the mistaken and foolish fear that such an institution would propagate among the neighbors the disease to the treatment of which it is devoted.

The proposed ordinance is only an isolated instance of the harvest, the seeds of which were laid by the medical profession and which it will require years of popular education and demonstration to overcome. In the early days of bacteriological research, the idea was prevalent that the presence of pathogenic bacteria necessarily would give rise to the related infectious diseases and that the infection could be communicated by even a transient contact. The early teachings insisted upon the communicability of infectious disease without taking account of the necessity of a susceptibility on the part of the implicated organism. People were taught to shun patients ill with infectious diseases. Although this teaching was imparted in good faith by physicians it was overdrawn and was instrumental in causing needless distress and even injury. There are many physicians indeed, who still are in fear of bodily harm when coming in contact with patients suffering from communicable diseases, and it is but little cause for surprise that the laity should find it somewhat difficult to take to heart and appreciate the modifications of the early lesson. It will be rather difficult to overcome the bacteriophobia influencing most people. On the other hand, it may be insisted upon that governing bodies like city councils should take advantage of the advice and information which may be obtained by expert investigators.

Even though the fault of this bacteriophobia lies with the medical profession the changed and changing results of research are being communicated to the laity and popularized so constantly and, ofttimes, so excellently that it is rather disheartening to think that the evident lessons of common sense and of medical research alike should find it so difficult to be accepted and lived up to. Public parks, which have been, most happily, called breathing-spaces of big cities, constitute the most efficient and the least expensive and troublesome means of disinfection that could possibly be utilized. None of the disease-producing microorganisms known can live for any length of time in sunlight, while they lose their virulence and are destroyed by exposure to diffuse daylight within a comparatively few hours. Public parks afford a maximum of relatively pure air and, while it is out of the question that they can be contaminated by the proximity of hospitals or that from them any harm can come to those passing more or less time in such a park, the location, on the other hand, would be of incalculable benefit to the inmates of any institution for the care of the sick.

Rather than propose an ordinance prohibiting the location of a hospital within a limited distance from a public park, ordinances actually should provide for the erection of hospital-buildings as near to public parks as is possible. In this manner, the patients would receive the benefit of wide open spaces covered with grass and trees, without injury to the population, while to these patients a distinct benefit would accrue, such as it is now very difficult and often impossible to provide except in those old-established hospitals fortunate in the possession of spacious grounds of their own.

Man has in him by nature but one good thing, the capability of improvement.—Stuart Mill.

THE INCREASING POPULARITY OF ALKALOIDS

The ninth revision of the U. S. Pharmacopeia was issued on September 1, 1916, and the first of this year it became the official standard as to all the specifications therein laid down. In looking over the changes that have been introduced in this revision, it is interesting to note that the number of almost all galenical preparations has been reduced, while more alkaloids and other active principles of vegetable drugs than ever before have been given recognition. No doubt the list below will interest our readers—adepts in active-principle therapy—showing side by side the number of tinctures, extracts, pills, and so forth, official, respectively, in the eighth and in the ninth revision:

Tinctures,	reduced from	.....	54 to 44
Extracts,	"	"	28 to 25
Pills,	"	"	14 to 7
Powders,	"	"	9 to 7
Spirits,	"	"	20 to 15
Fluid extracts,	"	"	85 to 49
Syrups,	"	"	28 to 21
Troches,	"	"	9 to 5
Ointments,	"	"	24 to 20
Cerates,	"	"	5 to 3
Wines,	"	"	8 to 0

That is to say, out of the previous total of 284 galenical preparations, 88 have been eliminated (or, approximately, 30 percent), while the class of medicinal wines has been dropped entirely. In fairness, it should be stated that many of the deleted preparations

had long since fallen into disuse among physicians.

On the other hand, the present revision of the Pharmacopeia lists 7 more alkaloids than did the one now superseded. Incidentally, this is of additional interest, because the year 1916 was the centennial for alkaloids, for morphine—the most important active principle of opium—was discovered in the year 1816 and cephæline—one of the active principles of ipecacuanha—was discovered by Pelletier in 1817.

The power to forget is one of the most valuable and helpful gifts which a man possesses.—S. Weir Mitchell.

PREVENTION OF POSTOPERATIVE INFECTION

When, in 1881, Cohnheim declared that "according to our present conception, everybody becomes tuberculous in whose organism the tuberculosis-germ localizes," he voiced the opinion of the bacteriologists of the day; an opinion, that continued to be held for years, namely, that an infectious disease is a consequence solely of the specific microorganism invading the body and there localizing and multiplying.

Recent researches have shown that this view is supported by facts only in part, and have demonstrated the immense importance of associated infection, particularly with pus-bacteria, as determining the severity of an attack of a given infectious disease. Indeed, Dr. H. W. Hill, of London, Ontario, recently gave it as his opinion (see the editorial in CLINICAL MEDICINE for March, p. 177) that modern infectious diseases are milder than they have been in the past, for the reason that, with our improved methods, the occurrence and severity of associated infections have been curtailed. Doctor Hill fears particularly the nonspecific infections with streptococci and staphylococci, holding that they do more harm in infectious diseases than do the original specific infections themselves. Certain it is that such affections as tuberculosis, alveolar pyorrhea, and others that—it is true—are based upon definite, specific pathogenic microorganisms assume a progressive and virulent character only through the intervention of associated infections, particularly the pus-bacteria.

The role of these harmful microorganisms has been recognized for a long time, and it is on account of measures taken against their invasion and multiplication, by means of antiseptic and aseptic surgical methods, that operative procedures of the present day have been developed to the remarkable extent prevailing. The means of securing freedom from postoperative infection have been various. For instance, it will be recalled that, in 1903, Miculicz succeeded in improving his laparotomy results by counteracting operative infection of the abdominal interior by means of nuclein injections, which increased the phagocytic power of the white cells by several hundred percent.

In the *Hahnemannian Monthly* for January, H. P. Replogle, of Altoona, Pennsylvania, relates that he prevents the occurrence of postoperative infection by means of prophylactic immunization against the microorganisms concerned, employing a mixed vaccine of the following formula: colon-bacilli, 200 million; staphylococci, all strains, 400 million; streptococci, 100 million; and pneumococci, all strains available, 100 million. He administers from two to four injections, increasing the dose by one-half on each consecutive occasion; the increase depending somewhat upon the amount of reaction obtained. These injections are given at four- or five-day intervals, with from three to four days elapsing between the last injection and the day for operation. If at the last injection the reaction is very slight, Replogle believes, one may be almost positive of having produced an immunity to the pus-producing microorganisms.

Since employing this prophylactic vaccination in 90 cases, Replogle has observed a pus infection only once, and in a patient who was very much run down, overworked, and who had received only one injection of the protective vaccine.

The addition of pneumococci to the vaccine is made for the purpose of guarding against pneumococcus infection of the lungs, following the administration of ether, and Replogle reports that since adopting this method he has never had a case of postoperative pneumonia. It may, here, be pointed out that postoperative pneumonia—which occurs notably after ether-anesthesia, but also, though less often, after the employment of other anesthetics—is not due so much to the mechanical irritation of the anesthetic (ether, especially), as has been believed, but, rather, to the fact that the anesthetic induces a lowering of the accustomed immunity against the pneumococcus, in consequence of which this organism can change from a facultative to an actual parasite.

It is to be kept in mind that the respiratory passages of virtually everybody are harboring pneumococci, among other bacteria, and that

these do no harm ordinarily, but may become active when the conditions for their multiplication are favorable. Such a contingency very naturally arises under the strain to which the organism is put as a result of the anesthesia and operation. Indeed, it has been held that postoperative pneumonia and many other forms of infection following operations are not always attributable to faulty technic with regard to asepsis or anesthesia, but that often such infection is endogenous, having been latent, or inactive, up to the time of the operation.

For this reason, Doctor Replogle's method of producing an immunity against possible harm arising through the action of these injurious associated infections is a very excellent one and one that promises to reduce the danger from postoperative infection at least to as great, if not greater, extent as is possible by the most painstaking aseptic technic.

If any misanthrope were to put, in my presence, the question, Why were we born? I should reply, To make an effort.—Charles Dickens.

WHENCE OUR ADVANCE?

In February, the American Drug Manufacturers' Association held its annual meeting in New York. One feature of the occasion was a rattling good talk by John Uri Lloyd. Among other things, he asserted that, barring the synthetics and biologics, every remedy in general use by medical men today came from some source outside the regular profession. All were originally introduced by old women, by the aborigines, by quacks or by the oriental races. In other words, all the drugs now official were originally only lay remedies.

Well, true enough—but, why should he have excepted the synthetics and the biologics? Who originated *them?*

The synthetics come to us from the great European chemical works. They spring directly and wholly from the desire to make money; they are astutely managed so as to produce the utmost possible profits. No other hypothesis can account for wise and wideawake Americans purchasing ton after ton of phenacetin at a dollar an ounce when Canada got it for 8 cents. No dialectician has yet succeeded in reading altruism into that proposition—nor anything else except greed on the one side and damphoolishness on the other. As to the biologics, antitoxin paid a royalty to its discoverer, and if any of its successors have no commercial interest back of them we should be pleased to know which it is. We gave ton after ton of pepsin before we found it worthless—after other and later biologic proprietaries wanted its place in popular favor.

Who discovered vaccination? The English milkmaids. Who revealed the germ-theory? Pasteur, the chemist; and what else did he introduce to us?

Who introduced hydrotherapy, electrotherapy, suggestion, massage, every other branch of drugless therapy; cinchona, ipecacuanha, and most of the specialties in therapy? Did any of them originate in the regular medical ranks?

To the dentists, we owe anesthesia and of late the foundation upon which we are building the doctrine of septic foci. Look to the dentists for new ideas and for support and fair trial of new ideas. The dentist is pretty likely to be a man ready to appreciate and take hold of improvements; the medical men too often sit back solidly in stubborn opposition to any innovation—anything that compels them to use their gray cells. Not all of them—were this the case, there would never be an advance.

Medicine was an offshoot from the priesthood, and, in its ingrained conservatism, its disposition to look on all innovation as essentially impious, the sacerdotal basis of our origin comes into evidence. It is to the heretic, the schismatic, with his iconoclastic hurling down from the pedestals the venerated beliefs of yesterday, that we owe every advance originating within or without our pale.

Some day—after the millennial dawn—we may learn that there is a germ of truth in every rebellion against received dogma, every breaking away through the established bounds. Every Hahnemann, every Thomson, every Mesmer, Perkins, Cagliostro, Priessnitz, Gall, Spurzheim, Still, Brinkerhoff, Eddy, Weltmer brings something to add to the common stock of the world's knowledge and the profession's armament. That each and every one of these seeks to push the applications of his special curative method far beyond its natural bounds, means nothing whatever—every eye, ear, skin, orificial, genitourinary, and other specialist does exactly the same thing. And he gets mad as the dickens when you allude to his mistake in crediting every headache to his particular pet organ, instead of realizing that a man is not all eye or all ear or all rectum, or that a woman is not all ovary or all nerves. Sometimes we meet a fellow, with whom we are constrained to argue that a man is not all

purse—but, while we may silence him, we never convince such a one.

Moral—let us quit the senseless quaver of opposition to any proposed advance, on the ground that it originated outside our own ranks; all the more, since the opposition would be multipliedly venomous if the progress really originated within our ranks. Learn to judge innovations, when presented to you, strictly on the ground of their real values.

Eugenics.—"Pa, if a man whose name was Eugene should marry a girl whose name was Eugenie, would they have eugenic babies?"

"Probably not, if they lived in a fashionable part of town."

THE LAW OF COMPENSATION IN MEDICAL EDUCATION

A short time ago, the present writer had an opportunity to become acquainted with the members of the medical profession in a number of small cities, and he was struck with one singular fact—the scarcity of young graduates. The members of the profession met, usually were advanced in years, most of them having been in practice ten, twenty or more years, while very few had less than five years to their credit. Judging from this fact, and considering the constantly increasing demands made by the public for new services as also the proportion of the recent graduates who go in for research-, laboratory- and other work that takes them out of the line of general practice or even of the specialties, a decided scarcity of doctors must be anticipated within a few years.

For a generation, we have had it dinged into us that the profession is overcrowded. Most of us have realized the truth of this and felt that more than one of our competitors might well be spared and his practice turned over to us. That we should have one doctor to every six hundred of our population, while Russia had but one to six thousand, only emphasized the problem before us; and so, the cry of fewer doctors and better ones was re-echoed everywhere, with no dissenters. In fact, it became a shibboleth; and the man who so much as suggested that the demands made by the American citizen upon the medical profession were somewhat in advance of those of the Russian mujik became suspected of lukewarmness.

Under the influence of such universally accepted teaching, the medical course has been advanced steadily, from two years, to six; its cost has increased even more than proportionally; the entrance requirements approximate those of a collegiate degree; and the number of medical schools lessens yearly as the weaker succumb to the sqeezing-out process. Moreover, the actual number of students in attendance in all American medical colleges falls rapidly.

Certainly, the grade of the American doctor has been raised, while the cost of professional attendance—to the physician himself—has risen very much more than its quality, without, however, an adequate increase in monetary returns. With the new duties saddled upon us by the medical supervision of school-children and by other public health duties, and with the development of this prophylactic movement that may naturally be expected, the result of a greatly lessened supply of graduates, with an increasing population, will not be long in becoming evident.

Broaden our definitions, however, and an entirely different state of affairs confronts us. Instead of basing our argument on the medical profession as enumerated in the standard directories, ask about the members of the healing fraternity as embracing everybody who is at present engaged in treating the sick, and we find that the number of these is, actually and relatively, greater than ever. Osteopaths, Christian Scientists, and the whole brood of outsiders swarm everywhere, until in those states in which the lines delimiting the regular profession are most closely drawn the outsiders actually outnumber legitimate practitioners. Twenty millions of America's citizens rely on these kinds of medical advisers, it is said—and we believe that the number is grossly understated, that forty millions approaches the truth more nearly.

Furthermore, in spite of the pressure brought to bear by the Association of American Medical Colleges and of the increased requirements of the medical state boards—especially since the publication of the Flexner report—there still are numerous medical schools that offer courses leading to the degree of Doctor of Medicine although they are not adequately provided with laboratory equipment and clinical material to turn out physicians of the high type demanded today. Being less expensive than the "Class A" or "Class B" schools, these smaller, inferior institutions naturally attract young men of limited means who want to get their degree as rapidly and cheaply as possible.

And so, the question is answered, Where are the medical students? The young aspirants flock to those schools that make medical education cheap and easy, or to

irregular schools of healing. This always has been so—and human nature never changes.

Young men under the direct influence of our best members are taught that only the few should enter medicine, youths who, according to Dawson, can devote $10,000 to the expense of preparation. A man who can afford such a sum for education is not penetrated by a very lively sense of the necessities of life, and, naturally, the scientific side of our multifarious studies appeals to him. The active, alert, wideawake American for whom his chosen life-work must include the earning of a living is likely to take a less academic view of the problem; he looks at the practical side and, consequently, is apt to choose the minor college or even some school of "drugless healing." He gets through with his course years before the other, and by the time young Moneybags secures his diploma young Hustler has built up a lucrative practice.

Do not forget that to the layman, as a rule, a doctor is a doctor and that one kind of doctor, to him, looks very much like any other. Of whatever school, all offer a legal opportunity to make a living by healing the sick, and, as he sees it, the one kind offers a far easier way than does the other. If, then, the young lay aspirant thinks at all of the relative morality of the two, his judgment is influenced by newspaper talk as to "Medical Trust," unnecessary operations, and such like, and sees no reason for discrimination.

However, this young man does not take into account the fact that the degree of Doctor of Medicine has a significance differing from that of "Doctor of Osteopathy," "Doctor Chiropractic," "Doctor of Naturopathy," and all the rest of them. It is unfortunate that an academic dignity like that of the doctor degree has fallen into such sad straits, but that is something which we cannot alter. We can, however, see to it that the degree of Doctor of Medicine really means something and that its possession conveys a warranty that the holder thereof has given proof of his fitness to act as medical adviser to the sick.

While deprecating absolutely the host of non-medical cults of healing, we do not mean to suggest that nothing good can come out of small colleges, or that the poor student does not have a chance today to gain a first-class medical education. Indeed, we are convinced that the reverse holds true, and that these schools turn out many well educated and capable graduates. Some of the foremost medical coryphees in our country received their education in schools that, today, would be ranked as belonging to Class C or even D, but they had the stuff out of which physicians are made and forged to the front ranks of their chosen profession in spite of their insufficient education, not because of it. It depends largely upon the student himself whether he will get the best possible results. The student who works his way through a medical school usually is a fighter and may be trusted to be sincere in his efforts to obtain a thorough medical education.

We are convinced that the present policy, namely, that of demanding from medical students a great deal, and now more than ever, and of refusing to admit them to the study of medicine until they shall have accomplished a minimum of two years of college work or its equivalent—is a proper one, and that it bears within it the promise, in the future, of better and more efficient medical care for our population than has been possible in the past. The suspicion with which the medical profession is viewed in many places, the bad odor in which it stands is an inheritance born of sins committed by physicians through centuries. The medical profession must redeem itself by educating the people to an understanding of its better and truer aims, of the wider and the farreaching extent in which physicians desire to exert their influence for the good of mankind.

All this is very good academically; practically it remains a fact that the attainment of a "Class A" medical education has become impossible, except at a financial sacrifice of which but few men and women are capable.

A strange anomaly is presented in our academic institutions. More boys and girls now are going through colleges and universities than ever before in the history of the country; and they are doing so because it is made so easy for them. But, on the other hand, fewer young men and women are passing through the professional schools now than ever before in our history, and this is because it is made so difficult for them, not alone through the many educational demands and requirements, but also because of the present-day excessive expense. It is not altogether a question of scholarship—that of money occupies the foremost place.

We believe that the possibility to secure a professional training, more particularly a medical training, should be made accessible to every ambitious young man and woman. In other words, we believe that high rates of tuition and other financial difficulties should be reduced, so that it may be as easy for a bright young student, financially, to get

through a medical school as it is now to get through a state university.

At the present time and under existing conditions, advances in medical requirements are developing a smaller but more finely trained class of physicians, but at the same time they are responsible for greatly increasing the numbers of practicians in the irregular classes that do not come under the purview of the state examiners. Let us take heed, lest in our honest desire to improve medical education we work injury, unwittingly, upon the public whom we wish to benefit.

If one's room is small, it manifestly takes less light to make it cheerful. Applied variously, this is one of the compensations of existence.—Curtis Yorke.

A DISCOURSE ON THE CIRCULATION

Our readers will have observed that we have paid more attention to the circulation and the remedies affecting it than to, perhaps, any other department of CLINICAL MEDICINE. Reasons there are in plenty. Upon the circulation, we depend for our significant data concerning the wellbeing of our patients; in it, we detect the first beginnings of the exhaustion of vitality that presages the coming defeat; the arising of complications, the presence of unsuspected elements of evil omen or, on the other hand, the assurance of a more or less steady progress toward recovery is given by a study of the circulatory conditions presenting themselves from day to day. And, yet, we are safe in asserting that no department of our physiopathology and of therapeutics is less thoroughly comprehended than that relating to the heart. Thus, for example, no cardiant is so generally administered as digitalis. Two of the greatest clinicians produced by France in the past half century have specially studied this remedy, namely, Huchard and Peter. But, Huchard asserted that the proper dosage of digitalis is one dose in six weeks, and Peter said that "in dealing with the heart the fear of digitalis is the beginning of wisdom." How many, what percentage, of our clinicians realize the significance of those two expressions?

Forty percent of our practicing physicians look upon digitalis as a remedy "for the heart". Sir Lauder Brunton divides the circulation-remedies into these classes: Stimulants and sedatives of (1) cardiac muscle, (2) motor ganglia, (3) inhibitory ganglia, (4) cardiac vagus ends, (5) vagus center, (6) accelerating, (7) capillaries, (8) vasomotor nerves, (9) vasomotor center. The three cardiotonic glucosides of digitalis appear in his tabulation as stimulants in 1, 5, 7, and as doubtful in 9. While he does not mention digitonin, the closely allied saponin present depresses 1, 3, 4, 6.

It is evident that when we speak of "toning" the heart we should go further and determine what part of the heart needs toning, and whether it really is the heart or some other part of the circulation that requires toning.

However, we did not start to discuss the human circulation, but want to speak of the circulation afforded by this journal. Not of the journal's circulation—that is a matter for the admiration and emulation of our esteemed colleagues in the editorial ranks. It is something more vital, for we refer to the circulation of ideas between journal and readers. There can be no circulation if the current runs in but one direction—there must be a return to the starting point. Rivers run dry if their water is not returned in the form of mist and rain and snow. The freer the circulation, the healthier the life of every part.

Doctor, are you returning the life-giving flood coming your way or are you a clogged capillary, an obstructed arteriole?

Let us put forward some particular proposition for a test—take this one, for example: Atropine, in full dose, seems to stop hemorrhage, because it increases capillary attraction and impounds the blood in these vessels, instead of allowing it to escape through the open orifices. Emetine, used hypodermically, also controls hemorrhage, but for reasons which are even less clear. Let the 30,000 doctors who read these statements be represented by x^2 plus $2xy$ plus y^2. Those who try the thing are represented by x^2; those who write and tell us the result, by $2xy$; and those who forget it, by y^2. You will see that we make no distinction between those who find the atropine or emetine successful and those in whose hands they fail, because to the journal the chief interest is as to the truth of the statement, not the establishment of the remedy.

Doctor, will you not be an x^2 and a $2xy$?

A MALARIA NUMBER OF CLINICAL MEDICINE

We intend to devote the May issue of CLINICAL MEDICINE more particularly to the discussion of malaria; its treatment and its eradication. It is hoped that many of our readers will contribute to this number, which should be a very interesting and helpful one.

Tell us what you have observed, not only in the customary treatment of malaria, but also after methods other than by the administration of quinine; further, what has been your experience, if any, with the intravenous or subcutaneous administration of quinine? what can you tell us about the chronic and recurrent forms of malaria; and how are they treated to best advantage? Finally, who can tell us, from his personal experiences and observations, about the work of sanitarians in the eradication of the disease.

Now, get busy. Please send us your articles early; they should be on hand by the tenth or twelfth of the month. Be brief, concise and to the point.

Surely, it is better to get up and kick circumstances, than lie still and let circumstances kick you.

SOME PROLIFIC WOMEN

It is to be feared that the present eugenic movement which calls for "fewer and better children" for the greater good of the common welfare, will remain an abstraction for some time to come, at least in Europe where the male population has been, and still is being decimated to such a terrible extent and where particularly those adult males are sacrificed who would be most fit physically to procreate.

Limitation of offspring has been practiced for a long time, and it is especially in France where it has aroused serious apprehension in the minds of socio-economists and of the authorities because the birth-rate failed to keep in advance of the mortality sufficiently to assure a satisfactory growth of the nation.

Nevertheless, it is possible even in France to find people who do not seem to practice race suicide, and it is interesting to find in the *Paris Médical* for December 16, 1916, a correspondence from Dr. Henri Raymondaud, concerning a peasant woman living in a little village in the Somme, who now at the age of 69 years is still active and in good health, and who is known all through the countryside as the woman with 35 children.

This woman, Marie Dehen, was born in 1847. She passed through her first confinement at the age of 18, and bore her last child when she was 49. Doctor Raymondaud adds that in all probability she could have continued much longer to bear children, since she ceased menstruating only at the age of 60—if it had not been for the fact that her second husband died.

This woman bore 32 living children, namely, 18 boys and 14 girls, of whom 8 boys and 7 girls are living; the others died while quite young, between 3 and 10 years of age. In addition, she had three miscarriages.

This case of an unusually prolific mother very naturally arouses one's interest and an attempt to discover similar cases or records. We have found a number, some of which even surpassed this last contribution to the record of "polygenic" women, as Doctor Raymondaud calls them.

According to the *Boston Medical and Surgical Journal* for August 31, 1911, an unusually large baby girl (14 pounds and 10 ounces) was born as the seventeenth child to the mother who was married at the age of seventeen, and is now forty years old.

In the *Buffalo Medical Journal* for September, 1912, reference is made to a negress at Niagara Falls, who gave birth to her twenty-eighth child. She has been married twice, the first time at the age of 16, and now is 44. This woman was delivered twice of triplets and three times of twins. This record of multiple birth is surpassed by an account given in a newspaper clipping (without indication of the source) according to which it is said that a man and his wife in Boynton, Oklahoma, are parents of eleven children born in three years. Triplets one year, triplets the next near, and five the year after. The oldest living child is fourteen and then come twins five years old, then the five as given above. At this rate of geometrical progression the parents would better call a halt or they will exhaust their bank account in a few years.

An editorial in *Gaillard's Southern Medicine*, July, 1910, reviews an article in the *Medical Times and Standard* which collated instances of unusual fecundity from literature. According to this review an account was found in the *Scottish Medical and Surgical Journal*, of 16 children born to a woman in four pregnancies. Reference is also made of a Pennsylvania woman 43 years of age who had been married at the age of 13 and had given birth in the intervening 30 years to 24 children, 20 of whom were living at the time.

An Italian medical journal guarantees the report of one Flavia Gratta who, it appears, was well known in Rome, and who had given birth to her sixty-second child when she was 59 years old. This woman was married at the age of 28, and bore in successive pregnancies 1 female child, then 6 male children, then 5 sons, then 4 daughters, then a series of twins, making their appearance annually, and then 4 sons.

According to the *Indian Lancet*, another Italian woman, who was married at 19 years,

bore 62 children, 59 of whom were male and 3 female. Eleven times she was confined of triplets, three times of 4 boys, at one birth 5 boys and 1 girl. She was a native of Nocera near Naples and was 57 years of age at the time of report.

Von Valenta (*Wien. Med. Woch.*, 1897, No. 3) gave an account of a linen weaver's wife, 40 years old, who was married at the age of 20 and gave birth to 32 children in 11 pregnancies, 26 being sons and 6 daughters. She herself was one of quadruplets and her mother had borne 38 children. Finally the same journal, 1897, Col. 1911, refers to an account from the sixteenth century which was mentioned by Martin Crusius in his "Annales Suevici", Francofurti 1596, where marriage with one husband was said to have resulted in the birth of 38 sons and 15 daughters, that is, 53 children.

He is a sociological philosopher, who says that the world is divided between those who eat too much and those who do not have enough to eat.

A NEW ANTIPNEUMOCOCCUS-SERUM—"TYPE 1"

The readers of this journal will remember a description of some interesting work upon the different varieties of pneumococcus that was carried out at the Rockefeller Institute and reported upon by Doctor Biehn in a paper published in CLINICAL MEDICINE for December, 1915. These investigations have culminated in the production of a specific serum for one of the four groups of the pneumococci, namely, for the one designated as "type 1." This serum is now offered for sale by the health department of the city of New York. It must be noted that it is specific only against this particular type of coccus. The remaining types are not suited for serum-treatment, but probably will, to some degree, yield to bacterin-treatment.

The Weekly Bulletin of the New York City department of health, in the issue for January 13, has the following:

"The types, or groups, of pneumococci found in pneumonia have been determined by animal-protection tests, and these results are paralleled by agglutination results. The latter method, therefore, can be employed for routine determination. It has been found that three distinct types—I, II, and III—cause about 75 percent of all cases of pneumococcus lobar pneumonia. The remaining 25 percent are caused by members of a heterogeneous group, called, for convenience, group IV, the members of which have no relationship one to the other in their serum reactions. Type III is the organism known as the pneumococcus mucosus. A serum against one type protects and, therefore, has therapeutic value only for infections caused by the same type. In the case of group IV, a group serum is, evidently, impossible. The therapeutic use of sera for types II and III has not been sufficiently satisfactory to warrant their general application."

Administration of this serum is by the intravenous route. The average dose for an adult is 100 mils (Cc.), and it is allowed to flow into the vein by gravity. The serum may be diluted with sterile saline solution; the fluid should enter the vein at the body-temperature. After a few drops have entered the vein, it is well to wait several minutes for any symptoms referable to the respiratory or circulatory system indicating hypersensitiveness. The remainder of the serum is then allowed to flow in very slowly.

Cole advises the subcutaneous injection of about 0.5 mil (Cc.) of serum when the sputum is collected for determining whether hypersensitiveness is present. A small vialful of horse-serum for this purpose can be obtained when the sputum is delivered to the laboratory. The dose is repeated, as determined by the response and the clinical condition of the patient. Two or more doses may be given at intervals of from twelve to twenty-four hours. Some rise of temperature and a subsequent fall follows virtually each injection, although the lowering of the temperature may be only temporary. If the serum is not sufficiently warm and is injected too rapidly, chills occur. Even with a proper technic, chills occur in about one-third of the cases.

One commercial house (Mulford) has taken advantage of this new work on the pneumococcus; but, instead of a specific serum for type I—following the New York board—it puts out a polyvalent serum containing antibodies for types I, II and III.

The most accurate and probably the most satisfactory therapy is, of course, based upon laboratory determination of the particular type of pneumococcus, and, if this be determined to be type I, the subsequent injection of the specific type-I serum. This is the method practiced in New York, where the health department furnishes the laboratory diagnosis without charge.

This is an interesting development in serum-therapy and probably will be followed up by more work of the same kind, especially with the streptococcus, which now is known to be manifested in numerous different forms.

Leading Articles

Internal Hemorrhoids

By Charles J. Drueck, M. D., Chicago, Illinois
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INTERNAL hemorrhoids are varicosities of the middle or superior hemorrhoidal vessels and arise entirely within the anus. They begin at the points of anastomosis between the portal and the caval systems. These anastomoses are very numerous. The most common origin is at the level of the valves of Morgagni, about one-half inch above the anal orifice, and from here they gradually extend up to the larger trunks and plexuses. Even normal veins are somewhat enlarged in this situation and are called glomeruli.

The Two Types of Hemorrhoids

Hemorrhoids occur in two distinct types, the small capillary and the large venous.

A *capillary hemorrhoid* is a small tumor rarely larger than the end of the little finger and sometimes as small as a pinhead. It is an arterial nævus, spongy in texture and resembling a strawberry. Early in their existence, these tumors have a granular surface covered with a very thin wall and are very liable to bleed. Later, a plastic exudate and thickened areolar tissue covers the vessel, hemorrhage then occurring less readily. The gentlest examination or even the passage of the feces may be sufficient to start hemorrhage. I recall one case in which bleeding was profuse, while the pile was found to be no larger than the head of a black pin. Excessive hemorrhage, particularly if spurting in character, is pathognomonic of capillary hemorrhoids. Frequently large amounts of blood are lost and a number of deaths have been recorded from this cause. Of course, a large capillary or arteriole is, necessarily, involved here.

This tendency to profuse bleeding makes a capillary hemorrhoid much more dangerous than the venous variety. In the palliative treatment, this distinction is imperative, because the patient may be exsanguinated while the physician is temporizing with injections or styptics. The capillary piles do not protrude or cause any of the pain or discomfort attendant upon the venous variety. Hemorrhage itself is the cardinal symptom and requires energetic or even heroic treatment.

The *venous hemorrhoids* are of more common occurrence than the arterial. The pile may appear as a good-sized tumor, frequently one-half to one inch across its base and covered with a livid-bluish and glistening mucous membrane. Matthews reports seeing one as large as a small orange. These venous hemorrhoids are situated in the submucous connective tissue. They begin with venous pools and are composed of a dilated and varicosed vein, with its capillaries, and also the arterial capillary supply. They are located, usually, one on each side of and slightly in front of the posterior commissure and on the right and sometimes left of the anterior commissure. Sometimes the whole anal ring is a mass of varicosed veins, especially when due to disease of the heart, liver or kidney, and this varicosed condition may extend the whole length of the rectum and even to the colon.

These tumors are not wholly composed of veins. Sometimes several small veins may be twisted together into one mass. The sacculations and varicosities are limited to the venous vessels and do not affect the arteries. Around this mass of veins there is a fibrous capsule which sends trabeculæ (partitions) in between the veins. The mucous membrane covering the pile is chronically inflamed, and the walls of the veins early are thickened by this inflammatory hypertrophy; but later they are extremely thin, with nothing but an endothelial covering. Sometimes such vessels may form large venous pockets.

Internal hemorrhoids are brought on by anything that increases the local blood pressure. Man is the only animal assuming an erect posture during most of the waking hours. In this position, of course, a heavy column of

blood must be lifted through these veins continuously for many hours. During our whole active life, there is the predisposition to the formation of hemorrhoids, and only some little local congestion or inflammation is required for the varicosities to develop. For this reason, proctitis is a very common cause of hemorrhoids.

The Relation of Proctitis to Hemorrhoids

Already early in my work, I noticed this association of hemorrhoids with proctitis. The acute catarrhal proctitis is often met with, and always you will find an edematous mucous membrane with its hemorrhoidal vessels engorged. As the proctitis subsides, the hemorrhoidal edema and engorgement also is reduced and finally disappears. If, however, the proctitis persists as a subacute or chronic form, the hemorrhoids also continue and a gradual hypertrophy of the mucous membrane results. This increases the bulk and weight of the mucosa, which separates and slides down on the areolar tissue until it is grasped in the sphincter. The spaces of the submucosa about the hemorrhoid are filled with connective tissue. Later, when the proctitis reaches the atrophic stage, the hemorrhoids remain, because of this connective-tissue infiltration which permanently constricts the venous overflow.

Now there enters a second factor. The descending fecal mass, acting in the reverse direction on the veins, distorts the latter further and tears more mucosa from the muscular wall. With each bowel movement, the hemorrhoidal mass acts as an obstruction as the feces are forced through. This increased muscular action drags down the hemorrhoid and the adjoining mucous membrane until they prolapse, thereby increasing the size of the hemorrhoid itself. Finally, wher they have attained considerable size, they prolapse easily and act as foreign bodies, tending to excite the sphincter.

Causes of Hemorrhoidal Congestion

Hemorrhoids brought on in the manner described are the result of digestive disturbances, the improperly digested or fermenting bolus acting as an irritant. In this way, constipation is a frequent cause, while the vein is ruptured by the engorgement and stretching due to the passage of the feces. Thus it is that drugs used to relieve the constipation (aloes, senna, calomel, gamboge, etc.) also frequently congest the rectal circulation. Warm enemas also act in this manner. Certain articles of food, by irritating the mucous membrane, cause increased peristalsis or tenesmus and thus provoke hemorrhoids. (Notable among irritating comestibles are, spices, peppers, mustard, sauces, radishes, water-cress, tamales, chili con carne, and pickles, also alcoholics and tea.) An excess of a carbohydrate diet, that can not be cared for by the liver, blocks the portal circulation and later the hemorrhoidal vein. These dietetic changes account for the apparent influence of the seasons upon the hemorrhoidal circulation. As the warm spring weather comes, the system cannot dispose of the same amount of carbohydrates as it had been accustomed to do during the winter and, so, the load is thrown upon the portal circulation.

Besides constipation, there are other conditions that cause straining or a bearing down and thus tend to congest the pelvic venous current, among these, particularly, stricture of the rectum or urethra, stone in the bladder, an enlarged prostate gland, the pregnant uterus or a myoma of that organ, pelvic exudates, adhesions, even a retroverted uterus. It is well to bear each of these conditions in mind, because a patient may consult you when suffering from one of them and, at the same time, complain of hemorrhoids. The hemorrhoids, however, do not require treatment directly, being wholly dependent upon the underlying condition. In this same manner, all those occupations that increase the abdominal or pelvic pressure will induce hemorrhoids, such as severe muscular exertion or prolonged standing or sitting still, especially if on a vibrating platform, as in the case of railroad-men or teamsters. Desk-workers also frequently are sufferers, owing to sitting in a bentover position, which crowds the abdominal contents toward the rectum.

One other class of positive causes of hemorrhoids is disease of the heart, liver, pancreas or kidneys and occasionally tuberculosis and syphilis. Since the exciting cause in this class of cases cannot be removed there is no hope of curing the hemorrhoids and a tentative treatment is all that should be undertaken.

The Symptomatology

Hemorrhoids sometimes exist for years without causing any symptoms whatever; again, they may be troublesome from the beginning. When they become inflamed or ulcerated, they cause great pain and distress and set up more reflex nervous symptoms than does any other disease. They may remain quiet for a long time and then without

any apparent cause become inflamed. When they are of large size, they produce a sensation of fulness or distention of the rectum, as if some foreign substance were present. During defecation, the tumor is forced into the grasp of the sphincter, when tenesmus is set up, and also a feeling of nausea and sickness. Sometimes the tenesmus is agonizing and its daily repetition exhausts the patient. After each bowel movement, he must replace the hemorrhoid and in doing so is likely to induce a spasm of the sphincter. If the hemorrhoid is allowed to remain in the grasp of the sphincter, it becomes strangulated and, eventually, gangrenous, when it sloughs off. Thus nature attempts to cure the trouble. Sometimes the slough or the surface beneath it becomes infected, and then pyemia, with perhaps a fatal termination, is the outcome, or an abscess forms, and a fistula is the sequel.

If strangulation and sloughing do not occur, the sphincter gradually relaxes and the piles are forced out by coughing, sneezing, stooping or even when walking or standing; and then remain out altogether. An acrid, irritating mucous discharge oozes from the anus, owing to the chronic proctitis, and keeps the perineum moist and often excoriated, thus favoring the growth of warty excrescences. This condition occurs most frequently in the aged, and here sometimes the discharge may saturate the clothing. The anal sphincter frequently is very much relaxed, thus permitting of an almost constant prolapse. Of course, inflammation and thrombosis, with suppuration, may occur without there being strangulation. Talka found ulceration or fistula in nearly one-half of his cases of hemorrhoids. If the hemorrhoids remain prolapsed for any time, the surrounding anal wall becomes inflamed and edematous, and this swelling further interferes with reducing the piles.

Bleeding in some degree is a symptom of all internal hemorrhoids. It may be slight, a mere streaking of the passages, or profuse enough to cause fainting. Frequently hemorrhage follows each movement of the bowels for a while and then ceases for several days or weeks, only to recur again just when the patient thinks he is cured. This constant loss of blood produces an anemia very suggestive of malignant disease. Prolapse of the tumor always favors bleeding. In women, a hemorrhagic flux replaces menstruation. In apoplectic subjects or those having atheroma, this periodic loss of blood lessens the tension of the blood-vessels and thereby diminishes the tendency to rupture of the cerebral vessels. In these persons, the prudent surgeon avoids removing this outlet.

Hemorrhoids of any variety are prone to excerbations of inflammation, followed by periods of rest. During the inflammation, they are very liable to ulcerate or slough, or an abscess may form beneath them. When the tumor is swollen or strangulated and actively inflamed, the sphincter alternately contracts and relaxes, causing excruciating pain, which lasts until the hemorrhoid sloughs off, is operated upon or relieved by local remedies. In old cases, the hemorrhoidal wall becomes tough and hypertrophied.

The Diagnosis

The diagnosis of internal hemorrhoids is quite easy, but the differentiation of the variety is much more difficult. Hemorrhage is the chief symptom, and it may be either venous or arterial in both varieties. The patient's description will be something like this: During defecation and perhaps before the bowels have completely moved, a more or less severe hemorrhage occurred, which lasted for some time after he had finished his toilet; the blood came in spurts and was bright-red; a dizzy feeling came on and he became clammy and pallid. There was little or no pain and no pile protruded.

This being the history, the patient's rectum should be thoroughly examined with a speculum, in a good light. The hemorrhoid may be small and elude digital examination, as it is soft and velvety; but, with the use of a speculum, it can easily be found, because the stretching of the gut usually starts the hemorrhage afresh and, if it is a capillary hemorrhoid, it will bubble or spurt.

Another patient may say that, after the bowels move, he has to retain his seat, because the blood continues to drop for several minutes and otherwise would soil his clothes. Here, the hemorrhage is less severe, because the connective-tissue growth becomes subject of a plastic infiltration, forming a thick covering that can be torn only by such a force as is but occasionally applied. The rectum feels as though it were only partly emptied, and, so, the individual strains in trying to expel "something." Usually, on palpation, he finds the hemorrhoid in the grasp of the sphincter and, unless it is replaced, the tenesmus continues for hours. This is the venous hemorrhoid.

The capillary hemorrhoid is soft, spongy or granular and easily yields or tears on pressure; hence, hemorrhage results from even

a slight injury. Therefore, the small capillary hemorrhoid is a source of great danger from the loss of blood, while the large, well-formed venous hemorrhoid is not so dangerous. The venous hemorrhoid, when of large size, will protrude, so that, if the patient assures us that there is no protrusion, we must suspect internal hemorrhoids, and probably of the capillary variety.

Digital examination is unreliable in diagnosing internal hemorrhoids, because even good-sized tumors can not be detected after they have been returned to the rectum, unless pedunculated. Inspection assists only if they protrude. Let the patient retire to a lavatory and strain a little, trying to force out the hemorrhoid. If this fails or is not convenient, then dilate the sphincter with a bivalve speculum, when the pile will fall in between the blades. If the tumors are low in the rectum, they may readily be seen by inserting one blade of a Sims speculum.

Other symptoms of internal hemorrhoids are vague and uncertain, as they occur in other rectal troubles also and may arise from remote causes. Pain in the thigh or back, sensations of heat or burning in the rectum, and frequent micturition, all are too unreliable to be considered indicative of any particular disease. It is well to take into account only such definite indications as relate directly to the rectum and anus, but these significant tokens should call for a thorough examination.

Some Remarks on the Treatment of Hyperthyroidism

By Henry R. Harrower, M. D., F. R. S. M. (Lond.), Los Angeles, California

THE editorial invitation extended in a recent issue of Clinical Medicine, to "throw more light on this subject" of hyperthyroidism, prompts the following remarks, which, it is hoped, may be of interest because of the numerous and widely differing measures suggested in current medical literature for the treatment of thyrotoxicosis, or hyperthyroidism.

To my mind, there are three important things to accomplish or to be attempted to accomplish in the treatment of this troublesome condition; namely:

First, the control of the toxemia, and especially of its serious cardiac manifestations;

Second, the removal of the sundry and widely differing causes of the thyroid irritability; and

Lastly, the reestablishment of the deranged metabolism and the "building up" of the badly disorganized cell nutrition.

The immediate treatment of cases of hyperthyroidism, in my estimation, centers on the control of the heart's action; and this is accomplished most satisfactorily by placing the patient at absolute rest in bed, in a quiet room away from the numerous worries and noises of the home. Cold applications over the region of the heart and of the thyroid gland exert some beneficial effect.

By far the most important remedy, in my experience, is, the extract of the posterior pituitary lobe, which may be given, by intramuscular injection, daily in doses of a 1-2 to 1 mil (Cc.) of the usual standard solution. I have had occasion to use numerous sedative remedies, and none seemed to exert so particularly beneficial an effect as this organotherapeutic wonderworker.

The usual effect of these injections is, the reduction of the pulse rate by from 30 to 70 beats a minute, while, by its remarkable influence upon so many functions, it also favors the intestinal activities as well as increasing diuresis. According to Pal, the principle of the posterior pituitary lobe appears actually to exert a well-defined antagonistic action upon the unruly thyroid gland. Whether the pituitary gland contains a principle that exerts an effect opposite to that of the thyroid gland (an antihormone), has not been established; still, I am convinced that, clinically at least, pituitary therapy is as profitable an advance in the treatment of hyperthyroidism as is any measure suggested in the past ten years and deserves much wider application and study in practice. This matter will be referred to again shortly.

First of All, Clean the Colon

Since it is imperative to accomplish some immediate and tangible results by the symptomatic treatment of the patient and particularly the heart's action, it is in order carefully

to investigate every possible source of toxemia and to antagonize it to the best of our ability. Undoubtedly the most fertile field for toxemia is the intestinal canal, and my routine treatment in such cases, instead of resorting to purging-treatment by mouth (toxins released by vigorous purging exert a very unfortunate effect upon the symptoms and have, indeed, led to the dismissal of the physician because of the severe reaction following the well-meant and none the less much-needed treatment), is, to prescribe a series of oil enemata administered on three successive evenings. These enemata should consist of 5 or 6 ounces of any convenient oil (cotton-seed, olive, almond), warmed to the body-temperature and injected with an ordinary bulb-syringe, being made, by position and gravity, to reach the farthest end of the large intestine. This injection is to be retained all night. It has been found that its repetition on the second and third nights may bring away still more impacted material that was not loosened by the first one.

Parenthetically I will mention that many subjects of hyperthyroidism have an associated condition that might properly be called mild mucous colitis, and I am beginning to believe that there subsists a distinct relation between this disease and serious endocrine disturbances. At all events, where intestinal irritability is discovered and the patient has been passing more or less mucus, 1 ounce of the pint of oil may be replaced by 1 ounce of ichthyol (or, as I prefer more recently, ichthyonat), which suffices to soothe the intestinal wall, while it also exerts a certain degree of antiseptic action.

If laxatives are prescribed, they must be of the gentlest-acting nature. Cathartic pills, pills of aloin, belladonna and strychnine, and active alkaloid-containing stimulants are not advisable, because of their vigorous action and also because of a frequently undesirable simultaneous effect upon the heart.

Next, Minimize Intestinal Toxemia

The next procedure consists in neutralizing the alimentary toxemia as far as possible and, at the same time, since it has been demonstrated beyond question that the majority of the alimentary wastes are acid in reaction, alkaline treatment is in order. It is my custom to direct the patient to drink during the twenty-four hours at least 3 pints of water in which from 60 to 100 grains of sodium bicarbonate is dissolved, but laying strong emphasis on the necessity for not taking any of the alkaline water within one hour before or three hours after meals. If a 2-quart Mason jar is filled three-fourths full with water and the soda is dissolved in it, not only does it facilitate the measurement, but the sight of it, in a conspicuous place, serves as a reminder, toward the close of the day, whenever the patient has not been drinking the amount ordered. Furthermore, the fact that the water contains a prescribed remedy and the reason for its administration has been made clear prompts the patient to overcome any difficulty he may experience in disposing of this quantity (unfortunately, it is not the rule, in these cases at least, to drink sufficient water), for, he realizes that it is not merely the drinking of water, but the following out of a part of the doctor's course of treatment. In addition to the foregoing, I frequently have prescribed the combined sulphocarbolates as a means of keeping the intestine as nearly aseptic as possible. The dose should be at least 30 grains a day; however, it seems poor policy to waste good medicine of this character by not first giving the intestine a thorough cleaning out. In other words, the sulphocarbolate tablets must not be prescribed until the fourth day of treatment.

Other Localized Infections as Focal Causes

The intestine by no means is the only source of toxic substances that irritate the thyroid gland. Thus, it has been found quite frequently that pyorrhea is an accompanying disturbance in these cases, so that this condition must be treated locally, and thoroughly. The use of iodoglycerol as a local antiseptic and as an indicator of "dirt" on the teeth (which latter must be removed mechanically) is of great advantage. Various antiseptic dentrifices and mouth-washes may profitably be recommended, while I have seen injections of emetine bring about very favorable effects, not merely upon the amebiasis, but also upon the thyroid gland and its functioning.

Other common sources of irritation of the thyroid gland are: diseased tonsils and infected nasal sinuses (frontal, ethmoid or sphenoid), pelvic infections, and, incidentally, local trouble in the angles of the intestine, the gall-bladder, and elsewhere.

The doctrine of focal infection was never more applicable and practically useful than in the "diagnostic treatment" of thyroidal disorders, and many a failure satisfactorily to control dysthyroidism has been owing, not so much to inappropriate treatment, as to

the fact that some hidden source of toxemia was overlooked.

The Influence of the Emotions

Before leaving the sources of thyroidal irritation, emphasis must be laid on still one other very important cause of functional thyroidal troubles. We are now convinced, by the writings of Elliott (London), Sergent (Paris), and Cannon (Boston), that the emotions exert a specific effect upon the chemistry of the body, through the faculty of the adrenal glands to respond to emotional stimuli. Fear, rage, pain, and even worry, all excite the chromaffin-system and through this effect cause sensitization or irritation of the entire sympathetic mechanism.

A case of exophthalmic goiter is on record which developed suddenly, as from a clear sky, immediately following the mental strain imposed by the San Francisco earthquake. I have seen a number of cases recently in which the emotional element was unfortunately prominent. One case in particular originated from the shock of an insignificant fall of a foot or two. Another was aggravated by family troubles, while a third one, progressing nicely under my routine treatment, was set back abruptly and the pulse bounded up 40 beats a minute because of the excitement accompanying a sudden sickness of another member of the family.

Unfortunately, the control of the mental and psychic influences is most difficult; nevertheless, it is of highest importance to attempt as best one may the removal of the sources of psychic irritation—fear and worry, and, be it remarked, much "company" and exciting reading.

Diet as a Factor

Practically all subjects of hyperthyroidism are poorly nourished, despite the fact that they may be hearty eaters and their digestion seems to be perfectly normal. The reason for this is, of course, that the thyroid gland controls cell nutrition and the excessive stimuli coming from this gland, as the result of its disordered function, cause the foods to be burnt up too rapidly; malnutrition and even emaciation, hence, being the rule.

For this reason, the dietary must be generous and fattening. In addition to three liberal meals containing as few purin-bearing articles as possible, I am in the habit of prescribing buttermilk prepared with a reliable culture of the bulgaric bacillus and to be drank at least twice a day, conveniently fitted in between the meals; and crackers with the buttermilk, if the patient cares for them. I am also very partial to ice-cream as a daily adjuvant to the dietary, not merely because of the gustatory pleasure it affords, but because of its high caloric value.

Another article of the diet suggested—one possibly not possessed of any well-defined nourishing value, but which is of undoubted service, not alone in this disease, but in many nutritional disorders, is a rich vegetable consommé prepared by cooking together various and differing combinations of vegetables, especially the green stuffs. In these, I include: spinach, beet tops, turnip tops, celery (including the leaves), celeriac, asparagus (not in every case, because of the renal stimulant present), tomatoes, fresh young peas (with pods included), stringbeans, turnips, potatoes, in fact, almost any vegetable; boiling them in sufficient water for a long enough time completely to extract the saline elements, so that they may serve as an efficient nutrient instead of being thrown away, as is the rule in our present wretched cookery. Needless to repeat here that these vegetable salts are of real value in many disorders of metabolism, and, surely, it is correct to put hyperthyroidism in this category. Incidentally, the head cook can modify the flavor and color of the consommé and change its concentration at will; the form of serving may vary from a hot cup to jelly (made with pure gelatin); it may be given iced or frozen; also, it makes a very palatable and useful dietetic adjuvant in many conditions.

Pancreatin a Useful Adjuvant

Not infrequently pancreatin may prove of distinct advantage, and I sometimes think that it has a dual action, in not merely increasing the digestion and, hence, favoring the assimilation of more much-needed food, but also acting upon the sympatheticotonic condition characteristic of this malady.

A word of explanation may here be in order. Toxemia having its origin in the thyroid gland or from any other cause, including the emotional stimuli referred to, gives rise to hyperadrenia; in fact, hyperthyroidism nearly always is accompanied by hyperadrenia, as may be quickly demonstrated by the modification of Loewi's instillation-test (putting one drop of adrenalin-solution into the conjunctival sac and observing its influence upon pupillary action). The dry mouth, the tremor, and some of the other nervous manifestations seem to me to be as much of

adrenal as of thyroidal origin. Now, it happens that the internal secretion of the pancreas exerts a decided antagonistic action upon that of chromaffin-cells, and, in fact, it has by some been called the "pancreatic antihormone"; hence, any means of facilitating this function of the pancreas (in addition to its external secretory powers) is distinctly in order.

The administration of pancreatin not merely assists in digesting certain foodstuffs in the bowel, but, like all organotherapeutic measures, brings about a homostimulant action, or in other words, it favors the work of the pancreas, increasing the output of its chemical substances. Within the past year, several communications regarding the use of pancreatin in hyperthyroidism have appeared in print, and, as for myself, while I do not think of making it the main treatment, I consider that 15 grains or more per day, given after meals, certainly makes a useful adjuvant.

All the above seems to be of practical value, while I have purposely refrained from commenting upon the fairly well-known drug-treatment and the consideration of the need for surgery and Watson's excellent quinine-urea injection-method, all of which are the subjects of recent communications.

I cannot refrain, however, from recommending the method of treatment suggested last year by Dr. George Richter, of St. Louis, which consists in the daily administering from 15 to 30 grains of the desiccated anterior lobe of the pituitary body. I have adopted this treatment in the case of 11 patients, some of them ambulatory and others resting in bed, and am convinced that there is brought about a valuable sedative action that is of distinct advantage, and I am hoping to be able some day to say definitely that this endocrine organ is *the* remedy for hyperthyroidism. At present, I can recommend it as a very useful adjunct to the other treatment above outlined, which has become a routine in my hands because of its effectiveness and reasonableness.

Angioneurotic Edema

By Clifford E. Henry, Ph. C., M. D., Minneapolis, Minnesota

ANGIONEUROTIC edema is also known as urticaria edematosa and giant urticaria. It is a distinct neurosis, in which the vasomotor nervous system is the affected part. The skin, subcutaneous tissues, and mucous membranes are attacked spontaneously. There are localized swellings lasting from a few moments to several hours. These swellings are peculiar, in that just one-half of the tongue may be swollen or one-half of one finger. In the few cases that I have treated, seldom have I seen a swelling go beyond the median line of that particular organ.

In mild cases, there will be a sense of itching or burning; and the localized swellings occur, but last only a short time. In severe cases, if the swelling affects the tongue, it may render eating and drinking impossible. If the larynx is involved, the swelling may cause death by suffocation. The mucous membrane of the stomach and intestines may become affected, when a hemorrhagic edema of the walls may cause severe colicky pains, also vomiting or diarrheal discharges in which there may be blood. The swellings on the surface have much the same general appearance as an ordinary hive bleb, only they are much larger. Between attacks, the patient seems to be perfectly well; however, he generally is of a nervous or neurotic type. The cause has been variously attributed to errors in diet, to nervous strain, rheumatism, malaria, menstrual disturbances, and trauma.

The Differential Diagnosis

Angioneurotic edema is to be differentiated from other skin affections as follows:

Severe urticaria: In this affection, the swelling can be produced by irritating the skin.

Local thrombosis: This ordinarily can be differentiated when the general case-history is considered.

Hysteria: The edema of hysteria is not recurrent.

Appendicitis: If the mucous membranes are involved, the colicky pains and vomiting may make the diagnosis difficult. As an illustration, I will report in detail the following case which brings out many features of this disease.

An Illustrative Case

Mr. W. C., age 34, electrician. First consultation February 18, 1914. Has had stomach trouble all his life, indigestion coming on about three hours after eating and not

getting easy until after next meal. Present attack came on six weeks ago. Complains of sharp severe pain across upper abdomen. Seems to be a ridge of bloating just over the gastric area. Pain starts about 11 a. m., 4 p. m., and midnight. Does not vomit or regurgitate sour food or gas. Bowels as a rule a little costive. Notices he has most pain when bowels are not kept open. Examination: Negative, except slight tenderness over McBurney's point and at Morris' point. Diagnosis: Appendical dyspepsia.

Treatment: Advised operation, but was refused. Prescribed: Mist. hydrastis comp. Sig.: Three times a day. On February 23, reported he was feeling fine. I next saw him December 11, and have the following history: Swells up at various places all over the body. Had a spell something like it when a boy. Saw nothing of it again until four or five years ago. Present attack started with one-half the tongue swelling until one inch thick. Yesterday and day before, arm was considerably swollen. At times, there will be a strip down his side or one-half the genitals. The swollen parts itch. A swelling never lasts more than twenty-four hours. Complains of pain in the upper abdomen. I dispensed kali muriaticum tablets, gr. 1-1000 each, and ordered three tablets every hour. I took a specimen of urine and several blood smears. The urine was normal and so was the blood.

December 15, no better. Prescribed: Specific medicine apis mellifica, dr. 1-2, in water, ozs. 4. Sig.: 1 dram every two hours.

December 28. After the third dose of medicine of December 15, the swelling was gone, and no return.

February 22, 1916. Both eyes swollen shut and considerable edema all over body. Has had no bowel movement since February 19. Says, the edema appears always when bowels are costive. Prescribed: Calomel, grs. 5; castor-oil, drs. 4; syr. rhubarb, drs. 4. Sig.: At one dose.

February 23. Wife 'phoned he is better, but still has some swelling.

February 29. Put him on specific medicine pulsatilla, dr. 1-2, in ozs. 4 of water. Sig.: One teaspoonful every two hours.

March 13. Says the medicine seemed to be just the thing, and feels fine.

April 19, 1916. For about two weeks, has been having attacks of pain that come on just above the navel and in the median line. Pain comes on suddenly, lasting from a few moments to half a day. Feels as though something was pulling on each side of median line outward and thus causing the severe aching. Does not belch gas. Bowels are costive, but has been keeping them open each day. Prescribed: Cascarophen. Sig.: One after meals.

May 18, 1916. Started having a little swelling in face yesterday. Prescribed: Anemonin, gr. 1-128. Sig.: One every hour when awake.

May 19, 1916. Swelling is entirely gone. Says it is easiest attack he has ever had.

January 2, 1917. For last three weeks, has been having attacks of pain extending across the sacrum and down the course of the great sciatic to the knee. Prescribed: one-sixth grain of a concentration of black cohosh; one-sixth grain of the concentration of false unicorn, and one-sixty-fourth of that of poison ivy. Sig.: Dose every hour. Also: Anemonin, every two hours.

January 3, 1917. Very much better.

An Analysis of the Treatment

Now for an analysis of the treatment of the above case. The first remedy prescribed was mistura hydrastis comp., composed of hydrastis, rhubarb, potassium carbonate, pepsin, and pancreatin. It is a tonic for the mucous membranes and an eliminant.

The second medicine prescribed was kali muriaticum in 3-1000-grain dose. As this condition seemed to be an exudate, I selected kali muriaticum, because Schussler, in his physiological-chemical data, says, this salt stands in a chemical relation to fibrin. Disturbances in its molecular action cause fibrinous exudations. The salt failed, because the disturbance is not due to change in the blood, thus promoting an exudate, but is due to a disturbance of the sympathetic nervous system.

The next remedy was apis mellifica. This remedy is a renal eliminant, and I have found it of value in many conditions where there is faulty elimination of this nature—certain rheumatic conditions, urticaria, some forms of cystitis in women. I have proven this remedy, to my own satisfaction, by estimating the total solids before and after administering the remedy. The record of February 22 and the prescription of that day show a decided need of elimination; and this, I think, explains the good effects of the apis.

The next remedy is pulsatilla. This remedy was suggested to me by Dr. Henry C. Aldrich, and, while I am not using it homeopathically, I am getting good results. On looking up pulsatilla in Ellingwood's "Therapeutics," I find him to say that it has a direct

influence upon the brain and spinal cord. It increases, in proper doses, the cerebral functions and imparts tone to the sympathetic nervous system. In toxic doses, it is a heart depressant; it lowers arterial tension and reduces the pulse rate. It exercises an influence upon the heart similar to that of cactus. Here is the ideal dominant remedy for this condition, if it is combined with the proper agent to promote elimination. The concentrations of black cohosh, false unicorn and poison ivy were prescribed because of their peculiar selective action on the nervous system of the pelvis and lower part of the spinal cord.

If I had operated upon this man when he first consulted me, I should have made a mistake. His abdominal symptoms were due to an involvment of the mucous membranes.

On final analysis of the case and of the disease in general, I believe it is a neurosis, due primarily to autointoxication. Errors in diet cause autointoxication; nervous strain causes autointoxication; rheumatism is only another name for autotoxemia, even though some may say it is due to a direct infection. It is not at all uncommon to see menstrual disturbances complicated by digestive disorders and constipation. This must cause more or less autotoxemia, and in certain individuals it will manifest itself in this form of urticaria.

I would define angioneurotic edema as a neurosis in which the vasomotor nervous system is affected and due to autointoxication.

Extrauterine Pregnancy

By P. T. Geyerman, M. D., Hot Springs, South Dakota
Surgeon to Our Lady of Lourdes Hospital

EDITORIAL NOTE.—The subject discussed by Doctor Geyerman has assumed increasing importance, of recent years, in proportion as the diagnosis of extrauterine pregnancy was made more frequently. Manifestly, a favorable prognosis depends upon the early recognition of the condition, and, it is hoped that this interesting article may contribute to make both possible.

IN referring to extrauterine pregnancy, we mean the fertilization and growth of the ovum in some other place than the uterine cavity, and this may occur in a tube, ovary, broad ligament or the abdominal cavity. With few exceptions, ectopic pregnancy occurs in the fallopian tube, and the majority of these cases takes place in the outer half.

When the corpus luteum ruptures, the ovum is expelled, which then is picked up by the fimbriated extremity of the fallopian tube and guided to the distal opening, from whence it passes to the uterine cavity, being moved along by the ciliated epithelium. When the ovum becomes impregnated, this usually occurs in the outer half of the tube, and if there is any interference with its proper passage tubal pregnancy is likely to result. Should the fertilized ovum be expelled from the distal end and become attached to the ovary, it may continue to grow in that locality and give rise to an ovarian pregnancy. Or, it may drop into the abdominal cavity, and then an abdominal pregnancy is the consequence. Furthermore, if the tube should rupture near the horn of the uterus and open into the folds of the broad ligament, the pregnancy may go on for some time in this situation.

It is very rare that a pregnancy can go on to full term in any of these unnatural locations, as it hardly is possible that any of these structures would permit of such enormous distention as to permit of a full-term growth, except the abdomen, where full-term pregnancy probably occurs more frequently.

Etiology

So far as I know, there is but one cause of extrauterine pregnancy that can definitely be demonstrated, and that is salpingitis and its results, including pelvic adhesions. In the great majority of the cases one will find a history of prior pelvic disease, some form of infection, either from below or from some infection of the peritoneum from an adjacent organ, as the appendix. This happens rather frequently when the tubes are bathed in pus from a ruptured appendix. In the 12 cases operated upon by me, every woman either gave a history of previous pelvic disease or the results of such were revealed at the time of the operation.

While I have not seen a tubal pregnancy occur in a normal pelvis, this undoubtedly does occur, and several theories have been advanced for its causation; such as malformations of the tubes, either natural or

resulting from interference with the lumen of the tubes in operations, especially where it is used to cover up raw surfaces in partial resection of the ovary; neoplasms and displacements also are mentioned as causes.

Pathology

When the impregnated ovum takes up its abode in the tube, it is destined, with few exceptions, to early destruction, and this virtually always inside of three months. The larger percentage either abort or rupture during the fifth or sixth week. If abortion takes place, it must do so before the end of the eighth week, since by that time the ostium is closed. The tube ruptures either into the abdominal cavity or the broad ligament; but even after this development may go on if the membranes have not ruptured and the placental attachment to the tube still is intact. When the fetus dies in the tube, we then have formed a tubal mole, caused by hemorrhage into the sac, which organizes. This may become infected and form an abscess.

The tube is not constituted to take care of the growing ovum physiologically. The decidua is poorly formed, and thus does not furnish the proper amount of nourishment to the growing ovum; consequently, abortion soon takes place. Further, the tube takes part in the general softening which occurs in the pelvic organs, so that under the expansion due to the enlarging ovum the tube is very liable to rupture. This causes death of the fetus and usually a severe hemorrhage.

In tubal rupture, the bleeding usually is very severe and may cause the death of the mother very soon after it occurs. The blood flows freely into the peritoneal cavity and there is little opportunity for clotting to take place; consequently, unless hemorrhage ceases because of the lowering blood pressure, the woman soon succumbs from loss of blood. Happily, this is not the usual outcome, nor is it likely to occur, unless some rather large vessel was opened or the eventual clotting of the blood is considerably delayed.

Blood clots gradually form, and, with the decreased blood pressure, bleeding ceases, at least for a time. The pelvis and lower abdomen frequently are filled with blood and clots, and in those women coming under operation a few days later considerable disintegration of the blood clots has taken place and there is present bloody fluid, along with considerable local peritonitis. This peritonitis is not of microbic origin, but due to the absorption of foreign proteids. If we consider that an inflammation always is due to bacterial invasion, then this can not strictly be called a peritonitis, but, rather, a state of chemical irritation; and this probably accounts for the extreme pain and excessive sensitiveness of the abdominal wall.

In tubal abortion, there is not so much bleeding; the larger blood-vessels are not so likely to be ruptured and there is more time for the blood to clot. Hence, although death may occur from hemorrhage, this is not likely. In both forms, when the bleeding is profuse, a hematocele forms in the cul-de-sac, which later becomes filled with a clot. The latter in time may become infected, especially so if there has been an attempt at abortion. Often in tubal abortion or tubal rupture the fetus is soon absorbed and in only two cases have I been able to find any evidence of it.

Along with the general congestion taking place in the pelvic organs, the uterus enlarges and when palpated simulates a normally pregnant womb. The endometrium is thickened and there is an increase in the muscle elements. The bleeding that occurs from the uterus is, probably, not from the tube, but comes from the endometrium, which continues to bleed and shed its decidua, owing to an extravasation of blood beneath the mucous membrane, which continually pushes out the decidua.

Symptoms

Ectopic pregnancy usually produces no symptoms until rupture takes place. These women do not consult the doctor until something happens. Such a woman usually passes one or two menstrual periods, then considers herself pregnant. Nearly always the first symptom that attracts her attention, leading her to believe that all is not well, is a sharp cutting pain in the lower abdominal region on the side corresponding to the enlarged tube. This pain may be very severe, and if the bleeding has been profuse she becomes pale and is likely to faint and suffer from air hunger. In other words, she has all the symptoms of an excessive hemorrhage together with the shock of severe pain. She looks, and is, terribly sick and also feels that way. These patients may bleed to death in a short time from a ruptured tube or an outpouring of blood from the tubal ostium. However, in the great majority of cases clotting occurs and the hemorrhage ceases for a time at least. The first attack may be very mild and cause the patient little or no concern. These mild attacks of pain in the

side continue at short intervals and soon there occurs mild hemorrhage from the uterus together with the passage of shreds of tissue due to the desquamation of the decidua. There may be a mild leucocytosis; the skin has a peculiar yellowish tinge due to the absorption of protein from the disentegrated blood clots. Symptoms of this nature may continue for weeks, even after all hemorrhage from the tube has ceased. There is more or less constant hemorrhage from the uterus, which brings on a rather severe secondary anemia. The patient is weak from the constant loss of blood and constant pain. If infection takes place we have coupled with this the dangers of a pelvic abscess.

Diagnosis

The differentation of a tubal from a uterine pregnancy before rupture is very difficult. The palpation of a mass on either side of the uterus is suspicious but by no means conclusive, as other conditions in the tubes may and do simulate tubal pregnancy very closely. As we are so seldom consulted for a diagnosis in this stage, our remarks will be confined entirely to the diagnosis after rupture. In a typical case this is usually easily made: A woman in good health with the symptoms of early pregnancy, who is suddenly attacked with a severe pain in the side, or pain that is first general in the abdomen and later localizing in the side, followed by collapse and pallor, no chills or rise in temperature, presents most certainly a case of ruptured or aborted tubal pregnancy.

In abortion, the pain is less severe; the uterine hemorrhage is more profuse. The pain is characteristic of uterine contractions and there is no marked tenderness in the pelvis. One observation that I have made in all my cases is the extreme tenderness over the lower abdomen due to the irritation of the peritoneum. Some of these cases are so exceedingly tender that one can scarcely touch the abdominal wall without eliciting severe pain. I have seen no other condition in which this excessive tenderness is so marked and constant; yet, the diagnosis between ectopic gestation and incomplete abortion may be extremely difficult and at times impossible. The differentiation from a normal pregnancy may also be confusing, especially so if there happens to be an enlarged tube on one side from other causes, or if a cystic ovary is present. Usually the surgeon does not see these cases until after the first symptoms have subsided and some of the patients come to us after a period of illness of two or three weeks. The diagnosis will then depend mostly on an accurate and complete history.

The menstrual history is especially important. Some patients continue to menstruate much as usual, but when questioned closely one is likely to find something irregular about it. Most patients cease to menstruate for a time previous to symptoms such as pain and flowing. The typical case needs no further description but the atypical, and these are the more common, may confuse us. An irregular pelvic mass, which may or may not fill the entire pelvis, soft or doughy to palpation accompanied by more or less tenderness, extreme tenderness over the iliac regions confined mostly to the affected side, little or no rise in temperature, a yellowish tinge to the skin, and a dark colored flow from the uterus should lead us to a diagnosis in nearly all cases and will do so, if we have made our observations carefully. It makes little difference as to treatment, as any woman with the foregoing symptoms and physical findings should be operated on as soon as her condition will permit it with safety.

Treatment

If the patient is seen immediately after rupture has taken place it certainly is advisable to operate at once; this is assuming that proper hospital facilities are at hand. I am aware that there is a tendency for surgeons to wait until after the initial shock has subsided and that not so many cases are operated on during this period as formerly. This, I believe, is a matter of individual judgment and can be decided only after careful observation by the surgeon. What might be a good surgical risk for one operator might be a very poor one for another. Every surgeon knows, or at least should know, within rather narrow limits what might reasonably be expected from his own work and this depends almost entirely upon the carefulness and rapidity with which he is able to follow a proper operative technique. With proper facilities and assistance, this operation can be done rather quickly and with little shock to the patient. Most textbooks lead us to believe that this operation can be easily and quickly performed; and this is true, when the pelvis is otherwise normal. In many instances we will find that the ruptured tube is densely adherent low down in the pelvis back of the uterus and it becomes necessary to free the tube and bring it up before we can proceed with the operation proper. While this is not a serious com-

plication, nor one that will greatly retard the rapid performance of the operation in the hands of one accustomed to this kind of surgery; yet, things of this nature must be taken into consideration before deciding whether an operation should be done at once under adverse conditions, or to wait for a more suitable time and with it better facilities.

In general, when proper facilities and assistance are not at hand it will be best to treat the patient expectantly and remove her to a proper place at a more favorable time. With few exceptions, these patients survive these early attacks; but, some die; and an operation quickly done will save more patients than waiting. Most cases will need operation during the chronic stage, as most patients are so situated that proper help cannot be at hand during the first few hours.

It is true that an occasional patient recovers without operation; yet, I believe that all these cases should be operated on, as the presence of an hematocele in the pelvis is damaging to the adjacent structures and subjects these patients to long continued illness. Occasionally these women come to us with a rather excessive uterine flow extending over a considerable period of time, with a consequent severe anemia, a marked yellowish tinge of the skin and general weak condition, and some rise in temperature. They are necessarily poor surgical risks. With rest in bed, ice bag over the uterus, and tonics, a decided change soon takes place and the operation can be done with safety.

In one of my cases pregnancy existed in both tubes simultaneously. Whether both tubes ruptured at the same time I am unable to say, as the patient came under my care about three weeks after her first symptoms occurred. She was weak and bed-fast; temperature irregular, from 97° F. to 101° F; pulse, 120 to 130; skin, yellow; considerable abdominal pain radiating upwards from the pelvis. There was a mass on each side of the uterus and the uterus was firmly fixed. Red blood count 1,800,000. White count 12,000. Polynuclears 75. Hemoglobin 30 Talqvist. With the usual treatment she soon began to improve and was operated on at the end of ten days. Both tubes were found ruptured; no fetus present. There were many dense pelvic adhesions and large numbers of dark clots and a large amount of reddish fluid. She made a nice recovery and left the hospital in the usual time.

I am unable to state as to the frequency of double tubal pregnancy occurring simultaneously but that it is rather rare is evident from the following extracts taken from various authors: J. Clifton Edgar says, in the last edition, (1916) of his "Practice of Obstetrics," (page 345) that "tubal gestation occurs very rarely as a bilateral affection."

In the textbook on "Obstetrics" by Edwin Bradford Cragin, (Lea & Febiger, 1916, p. 522) double tubal gestation is not mentioned at all.

Nor does DeLee, ("Principles and Practice of Obstetrics" 1913) mention the bilateral occurrence of this accident, saying only quite generally that extrauterine pregnancy is quite frequent (p. 382).

In a study of Ectopic Pregnancy, With a Report of Twenty-seven Cases, (International Clinics, Vol. LV, 1906, p. 194) Thomas A. Ashby does not mention double tubal pregnancy but he found the right tube involved more frequently than the left.

Franklin S. Newell presents a study of sixty cases of extrauterine pregnancy, in the same volume of the "International Clinics", p. 214. All these sixty cases were tubal. The right tube was involved in thirty; the left in twenty-four, and in six (operation by vaginal section) the pelvic relations were not made out clearly. He evidently did not see a single case of double tubal gestation.

In a study of 106 cases of tubal pregnancy, F. R. Oastler (*Surg., Gynecol. and Obstet.*, Feb., 1917) records two of bilateral impregnation.

WHEN I GROW OLD

When I grow old, God grant that every child
Will feel the youthful texture of my soul
And will not turn away from me
As from a shade or shrunken vine,
When I grow old.

When I grow old, God grant that I may have
some task
Which must be done or someone fare the worse —
That in some corner of the earth
Some one will need my hand,
When I grow old. —*Ethel R. Peyser.*

A Study of Aconite

By H. J. Achard, M. D., Chicago, Illinois

[*Continued from March issue, page 194.*]

The Therapeutics of Aconitine

FOR this discussion of the clinical application of aconitine, the detailed chapter on this subject in Waugh and Abbott's "Positive Therapeutics" was not consulted, for the reason that this great work occupies an honored place in the library of most readers of Clinical Medicine. Where contributions to literature are cited, they are taken from books and journal-articles not in so common use and not so well known as the Waugh-Abbott work. It must be said, however, that much valuable information is laid down in this volume, and it should be consulted by all physicians who desire to study the interesting drug under consideration.

Aconitine in Sthenic Congestive Conditions

The special cases in which aconitine is useful are those of sthenic character, in the relief of congestion. All forms of throbbing pain (earache, toothache, headache) are likely to be relieved, as are painful disorders of the respiratory organs, such as pleurisy. Great relief often is experienced from its use in inflammatory rheumatism. Scarlet-fever, as also the fever of measles and similar diseases, often are benefited markedly by aconitine, but care should be taken to avoid excessive depression. Neuralgic pains have been relieved by the local application of aconitine, preferably by inunction. It must never be overlooked, however, that precaution must be taken to prevent the possibility of fatal absorption.

The results from the use of aconitine are most apparent when the inflammation is not extensive or not very severe, as in the catarrhs of children, in tonsillitis or in acute sore throat. In these comparatively mild diseases, especially if the drug is given during the earliest stage, the dry, hot, and burning skin grows comfortably moist in a few hours and then becomes bathed in profuse perspiration, often to such an extent that drops of sweat run down the face and chest. With the sweating, there comes speedy relief from many of the distressing sensations—the restlessness, chilliness, heat, dryness of skin, aching pains, stiffness. The quickened pulse simultaneously becomes far less frequent, and in a period varying from twenty-four to forty-eight hours both pulse and temperature reach their natural state.

If caught at the start, quinsy or a sore throat rarely fail to yield within twenty-four to forty-eight hours under the full influence of aconitine. After the decline of the fever, the sweating may continue for a few days and even may be sufficient to annoy the patient. If administered early enough, the beneficial effects of the drug are prompt and striking. Thus, large, livid, red glands and dry tonsils will, within twenty-four hours, present the aspect indicating the subsidence of the acute stage of inflammation, the disappearance of the swelling, with much redness, while the membrane becomes moist and bathed with mucus or pus. Just at this stage, some strong astringent (glycerite of tannin, silver nitrate) will remove most of the remaining diseased appearance, and also the pain, if any still persists. To those who may not have tried it, these visible effects of aconitine on inflamed tonsils, et cetera, may seem exaggerations, but they can readily be verified clinically.

Most observers ascribe the influence of aconitine upon inflammation to its action on the heart and point out truly enough that it is most useful in sthenic forms of disease; indeed, it must not be forgotten that it may do harm in cases of great weakness and of feeble heart, unless care is taken to correct the depressing action, by adding digitalis and strychnine.

Although aconitine is indicated and may be administered safely in the febrile affections, more particularly in children, it cannot be expected to shorten the fever of acute specific diseases, such as scarlet-fever, measles, and the like; it exerts a beneficial influence in these cases by soothing the nervous system and favoring sleep. There is no doubt that it can control the inflammatory affections which often accompany sthenic diseases and may endanger life by their severity. Thus, aconitine will moderate, although it neither prevents nor shortens the course of the throat inflammations in scarlet-fever or of catarrh and bronchitis in measles, and it will lessen the height of the fever in this indirect manner.

How Aconitine Acts on Congestion

In sudden congestions from exposure to cold and wet, with a consequent "cold,"

headache, stoppage of menstruation, and so on, the prompt use of aconitine usually will restore the circulatory equilibrium and bring back the flow, in that way averting a serious illness. In the opinion of George F. Butler, there is probably no better combination to break up a cold than aconite and Dover's powder, the former being given at frequent intervals for an hour, and followed, preferably at bedtime, by 8 or 10 grains of the opium and ipecac powder. Sajous accounts for the value of aconite to arrest colds by the fact that it dilates the peripheral arterioles, and thus allows a greater volume of blood to penetrate the capillaries and to exercise more effectively its antitoxic action. Professor William Hanna Thomson values aconite next to opium in the relief of pain due to inflammation, especially in inflammations of serous membranes and of the heart, in which the coaltar analgesics are comparatively useless. He says that the pharyngeal discomfort, also tonsillitis and acute laryngitis attendant upon or subsequent to an attack of a cold are relieved, with certainty, by aconite.

The same author asserts that in angina pectoris the main reliance must be upon aconite, which should be given in large doses and continued for months. The drug has been recommended also in the acute stages of cerebrospinal meningitis, and Ringer has found it of service in erysipelas, especially if administered at the beginning when it may cut short the attack. Even when the disease continues in spite of this treatment, it will reduce the swelling and hardness, lessen the redness, and prevent the inflammation from spreading. Abraham Jacobi recommends aconite in acute rheumatism of infancy, to relieve vascular pressure. He supports it with digitalis and veratrine, and sometimes with colchicum or quinine.

Aconitine in Vascular and Nervous Excitement

It has been shown that aconitine lessens the rapid rate of the circulation. It may, therefore, be used in those cases where it is needful to subdue vascular excitement, in fact, according to Ringer, it may be given in precisely those cases which were formerly treated by bleeding. Aconitine usually will subdue the fluttering of the heart of nervous persons, and also nervous palpitation. More general treatment often is required in these cases, but, when the conditions causing the disturbance cannot be ascertained or removed, aconitine may be employed to advantage. This use of the drug in "throbbing heart" is supported by Sir Clifford Allbutt, who says that it is successful when other remedies fail and this without ulterior harm. He insists, however, that the use of the drug should not be prolonged and that it is only a palliative in distress.

In heart strain caused by effort, if the heart is bumping and fretful, the same author declares that very small and occasional doses of tincture of aconite may be administered with care and prove helpful. If the condition be, rather, one of the diffused wave of dilated chambers, of course such a drug is to be deprecated and more bracing remedies given preference (digitalis). In tuberculosis of the pericardium, aconite can be employed—if indicated—to decrease the cardiac force. For aortic stenosis, the best treatment is to give aconitine in doses sufficient to slow the pulse. In mitral regurgitation, the best vasodilator is aconitine, and it should be administered with each dose of digitalis. It is well in these cases to prescribe a laxative saline in the morning. In aneurism, aconite has been recommended as a cardiac sedative.

Editorial Defense of Aconite

An editorial in *The Therapeutic Gazette* for February 1912, refers to the fact that aconitine fails to slow the pulse in cases of cardiac disease, particularly in instances of ruptured compensation; but the editorial writer refuses to admit that this offers sufficient justification for the assertion that this drug never does so, pointing out, very properly, that the conditions which are present under these circumstances are very different from those that are present when aconite has been employed for other reasons. "Thus it may be pointed out that the administration of digitalis when fever is present nearly always fails to slow the pulse, yet, this fact in no way contradicts the even more generally accepted statement that digitalis is the most powerful drug that we possess to diminish pulse rate under ordinary conditions. Aconite may not be able to slow the heart in the presence of dilatation and valvular disease, but may slow the heart in the presence of fever or nervous palpitation."

The editorial proceeds to show that, "although aconite may not act and produce beneficial results in the manner which has been received generally, this does not disprove good results when the drug is administered properly and in suitable cases." That it is a valuable remedy in many cases of socalled "tobacco-heart," in the overacting hearts of athletes, and in certain cases of tachycardia

associated with neurotic symptoms, is, the editor thinks, undeniable.

A Safe Drug in Hypertension

In accordance with its action as a vâsodilator, aconite has been recommended in conditions associated with hypertension, and is said to be preferable to the nitrites in the treatment of arteriosclerosis. William H. Thomson claims that it is particularly efficient and permanently beneficial in this condition as a vasodilator, and he continues its use for long periods without fearing depression of the heart. He calls attention to the fact that under the influence of aconite the increased elimination of urea has particular value in this condition. In like manner, aconite has been recommended as a potent and reliable remedy in apoplexy.

Aconite has, further, been found to be of service in the distressing restlessness of "fidgets," which affects men as well as women. Ringer has known a few drops of the tincture, taken at bedtime, to calm the patient and give sound, refreshing sleep. It may be necessary to repeat the dose several times. In nervous apprehension and anxiety, also, aconite has demonstrated its value, and even in nervous shock incidental to impending operations.

The Relief of Neuralgic Pain

One of the earliest clinical uses to which aconite was put was for the relief of neuralgic pain, and this is readily understood if it is remembered that Burggraeve recommended aconitine for cases of continued neuralgia associated hyperemia; however, in intermittent neuralgia, he has obtained better results from quinine. This favorable effect of acontine is particularly marked in trigeminal neuralgia, also in beginning hemiplegia of one-half of the face and in spastic convulsions of facial and eyelid-muscles (W. Reil.) In trigeminal neuralgia, aconitine is advocated particularly by Alfred Fuchs, of Vienna, who asserts that the drug has a specific action in this distressing condition. It is necessary, of course, to use a dependable preparation, and the author named insists upon energetic catharsis as a condition for successful treatment, as it was recommended first by Professor Gussenbauer. Aconitine should be pushed in these cases until weakness of the pulse is noted, and a marked sensation of tingling and numbness in the tongue and in the fingers. Meanwhile, the patient should not be about and should be warned against any sudden exertion.

The value of aconitine in neuralgia has been denied; for instance, by W. M. Barton (*J. A. M. A.*, 1910, July 23, p. 285), who admits that pain may be numbed by local application, owing to the depression caused by action of the drug, but claims that this benumbing effect is not produced by therapeutic doses administered internally. The preponderance of clinical experience, however, is in favor of the antineuralgic action of aconitine on internal use, and I have observed a new instance of this action, while preparing this paper. I saw a severe and persistent supraorbital neuralgia disappear promptly after a few doses of aconitine.

There are many other uses to which aconitine may be put to advantage, and I have believed it best to arrange these in the form of therapeutic aphorisms as they have been collected from literature and culled from personal experience.

Various Clinical Uses of Aconite-Preparations

In muscular rheumatism, applications of aconite and chloroform may afford relief.

In neuralgia of the liver, temporary relief may be had from drugs that act more directly on the vasomotor centers or the terminal nerves. Of these, aconitine in frequent small doses (1-800 grain)—although sometimes, doses three or four times this amount may be required—every hour or two, for two, three or more doses, is of signal service.

In acute nonsuppurative hepatitis, the cardiac and arterial tension is lowered by aconitine.

In acute nephritis, aconitine frequently controls the nervous symptoms when they are due to high blood pressure and an overacting heart, through its action as a cardiac sedative.

In hyperemia of acute nephritis, aconitine has been recommended by some authors, one or two granules of 1-800 grain to be taken every one-half hour until there is well-marked reduction of the force of the circulation. The claim has been made that it is not only a sedative of the general circulation, but influences directly the renal hyperemia.

In vomiting of acute nephritis, one granule of acontine every hour, for four or five days, has been recommended.

It has been said that, in all cases of chronic interstitial nephritis, 10-drop doses of the tincture of aconite (U. S. P. 1890) four times a day should be ordered continuously. Cases are on record, of patients who immediately felt the loss of this valuable vasodilator whenever they omitted their aconite doses. The granules of crystallized aconite may be em-

ployed in the place of the tincture, administering 1 or 2 granules for each ten drops.

In hematuria, where the occurrence of blood in the urine is associated with overaction and high blood tension, the use of cardial sedatives, such as aconitine, is indicated. Aconitine, therefore, is to be employed in uremia, because of its influence in lowering blood pressure and at the same time increasing the output of urea by the kidneys.

The injection of 8 or 10 minims (0.5 to 0.6 mils (Cc.) of the tincture of aconite into the rectum, while perhaps producing a slight prolapsus of the rectum, quickly affects an irritable stricture of the urethra, so that a catheter may be passed with little difficulty, although the operation may previously have been found impossible (G. F. Butler).

It is stated that aconitine heads the list as a remedy for toothache.

Aconitine is said to be especially useful in pruritus without manifest eruption and which is of recent occurrence.

Trousseau believed that the real service obtained from preparations of aconite in the treatment of spermatorrhea consists in its undoubted influence upon the entire nervous system.

Vaccine- and Serum- Therapy in Everyday Practice

XII. Infections of the Respiratory Tract (Concluded)

By W. C. Wolverton, M. D., Linton, North Dakota

EDITORIAL NOTE.—A small instalment of Doctor Wolverton's series of articles on vaccine- and serum therapy appeared among the miscellaneous articles in the January issue, page 55. The present article continues the series.

[*Continued from January issue, page 56.*]

Bronchopneumonia

THE pathology of lobar pneumonia and of bronchopneumonia differs markedly, in that in the former condition there is *massive* consolidation of lung-tissue, involving usually an entire lobe of the lung or even more than this, while in bronchopneumonia the affected areas occur as small patches, scattered throughout one or both lungs. From these facts, it is logical to reason that bronchopneumonia would offer a more favorable field for bacterin-therapy than would lobar pneumonia; and, in actual practice, this has seemed to be true.

Where there is *massive* consolidation of lung-tissue, it is much more difficult for the antibodies, formed in response to the administration of bacterins, to reach the pneumococci and other offending microorganisms surrounded by deposits of fibrin and blood than where such areas are relatively small and scattered. There is another fact in connection with the etiology of bronchopneumonia that makes this condition relatively more amenable to bacterin-therapy than is the lobar variety; namely, that the deadly pneumococcus is not nearly so constant a factor in the production of the former as of the latter variety of pneumonia. In many cases of bronchopneumonia, the ordinary pyogenic bacteria, the pneumobacillus of Friedlaender, the influenza-bacillus, and possibly other varieties of bacteria, either singly or, more often, in combination, prove to be the causative factors.

As the great majority of our cases of bronchopneumonia occur among young children and infants and as it is difficult or impossible to administer, for any prolonged period, to these patients of tender years any great amount of medicines by mouth, the efficacy of bacterin-therapy in this disease is doubly a blessing.

I have come to rely so implicitly upon the bacterins in the treatment of pneumonia in these, our little ones, that my employment of drug-therapy is merely nominal. Where the stomach will tolerate them, I gladly prescribe certain drug-remedies, and believe them to be of unquestioned value; but, frequently, their use is precluded, because of gastric irritability, and then we must depend upon the bacterins, external applications, and hygienic and dietetic measures.

Value of the Mixed Stock Bacterins

Because of the variable bacteriology of bronchopneumonia, a bacteriologic or at least microscopic examination of the sputum always constitutes a valuable guide to

rational bacterin-therapy; but, since children rarely and infants never expectorate, a sputum examination seldom is possible. Hence, we must, in the great majority of cases, rely upon the employment of a "combined" bacterin of the stock variety.

Personally, I have obtained very satisfactory results from a polyvalent stock bacterin containing, in each mil (Cc.), the following: Friedlaender bacillus, 300 millions; micrococcus catarrhalis, 200 millions; pneumococcus, 80 millions; streptococcus, 60 millions; staphylococcus aureus and albus, of each, 200 millions. Of this combination, I employ a dose of from 0.20 to 0.40 mils, according to the age of the child; and I have yet to see any evidence of a harmful negative phase from this dosage. If a decided improvement in the clinical condition of the patient does not ensue within forty-eight hours following the administration of the initial dose, I repeat the inoculation, with slightly increased dosage.

Some Helpful Drugs

In addition to the bacterin-treatment of bronchopneumonia, several other remedial measures have proven to be of considerable value. Among these, the employment of the mixture of guaiacol, eucalyptus, and camphorated oil, together with the fitting of a cotton-lined jacket, takes a prominent place. Both these measures have been described in detail under the treatment of lobar pneumonia, and, so, will not be spoken of at length at this time. Suffice to it say that in the class of patients under discussion, namely, infants and young children, the percentage of guaiacol should be very small, probably never exceeding one percent.

When the cough is "dry", I like the effects of a tablet containing 1-100 grain each of tartar emetic and ipecac, with milk-sugar as the excipient. One or more of these tablets, according to the age of the child, may be given, either whole or powdered and mixed with a little water, every two hours or less often, as indicated by the looseness or dryness of the cough.

Because the child cannot expectorate the sputum and, consequently swallows it, it is quite necessary to obtain a free evacuation of the bowels every day, so as to prevent the putrefaction and absorption of this highly toxic material. To me, it seems that the combination of calomel and sodium bicarbonate is especially indicated for this purpose.

When hyperpyrexia is a symptom, the well known defervescent combination, consisting of aconitine, veratrine, and digitalin, or, a granule containing aconitine, digitalin, and strychnine, is indicated. In these cases, too, the "Murphy drip" should be used; and, if the child is unable to take sufficient nutrition by mouth, glucose should be added to the water thus administered. An ice-bag should be applied to the head when the fever is excessive, especially if delirium be present.

Keep the Lungs Clear

An injunction that *must* be thoroughly impressed upon the mind of the mother or nurse is, that the little patient *must not be allowed to lie in one position* more than fifteen or twenty minutes at a time, but must be turned frequently from side to side or taken up and carried about. If this precaution be not observed, the child's lungs fill up, like a sponge, with fluid and, to use the expression of one of my teachers, "the child drowns in its own secretion". Cyanosis proclaims this "filling up of the lungs"; and at times it becomes necessary to *invert* the child completely and pat it rather forcibly on the back, in order to bring about the expulsion of the accumulation. Also, during the spells of coughing, it is well for the mother to turn the child face downward, across her lap, with its head somewhat lower than its body, so that gravity may aid the little one in its efforts to clear out the lungs.

It is well to keep the air of the sick-room moist, by placing a shallow pan with water on the back of a stove or on a radiator. To the water, there may well be added compound tincture of benzoin, oil of eucalyptus or guaiacol, or a combination of all three.

The Stage of Convalescence

With the beginning of convalescence, a tonic preparation is required, and no combination so admirably meets the requirements as the arsenates of iron, quinine and strychnine, with or without the addition of nuclein. When absorption of exudates is slow, iodide of iron is indicated, either in the form of the U. S. P. syrup of ferrous iodide or in tablet form. It is usually very difficult to induce a child to take the syrup, on account of its unpleasant taste, so, I ordinarily prescribe the tablets.

When the course of a pneumonia in a child is prolonged beyond, say, three weeks, with intermittent fever, sweats, and shallow breathing, a careful examination will reveal, in nearly every case, the existence of *empyema*. Of course, where a physician has been in attendance throughout the course of the

trouble, this rarely will occur, as his routine examinations of the chest will reveal the presence of serous pleuritic exudate before it has had time to become purulent. However, with many of us, country practice forms a large part of our work, and we occasionally are not called to see these patients until empyema is well established.

Pleurisy and Empyema

We shall consider these two conditions together, as pleurisy with effusion is quite prone to become empyema, unless it is recognized early and is promptly and effectually dealt with.

In *primary* pleurisy with effusion, when the exudate is found to be sterile, it is probable that the tubercle-bacillus is the exciting bacterium; but, the pneumococcus and streptococci undoubtedly are the cause of some of the primary cases. And, in the *secondary* cases of pleurisy with effusion, the two last-named varieties of germs are the causative agents in the majority of cases, although the Friedlaender bacillus, the typhoid-bacillus, and the diphtheria-bacillus have sometimes been found. It is in these *secondary* cases, usually associated with pneumonia, that the process is liable to go on to suppuration.

It behooves us, then, in all cases of pleurisy and of pneumonia, to be ever on the watch for signs of the formation of a pleural effusion; and, when this does occur, promptly to evacuate such fluid by means of thoracentesis; that is, puncture, or tapping, of the pleural sac.

The Murphy Fluid in Pleurisy

Some five years go, a new method of dealing with these cases of pleural effusions came to my notice; namely: the aspiration of the fluid and its partial replacement by injecting into the pleural cavity a 2-percent solution of formalin in sterile glycerin ("Murphy's fluid"); prepared twenty-four hours prior to its administration. This treatment is particularly efficacious when employed before suppuration develops; but, even in empyema, it often obviates an open operation and drainage, and possibly the mutilating operation involving the resection of ribs.

An illustrative case occurred in my practice a little less than three years ago. A 4-year-old boy evidently, from the history furnished by his father, had had an attack of pneumonia some time in March. No physician was called to see the little patient, who, the parents believed, had recovered from the attack. Then, about two weeks later, the boy began to have an irregular fever; his breathing was rapid and shallow; he had a dry cough; he had frequent profuse sweats. When this had continued for a week or more, the boy was brought to me.

I found the entire right pleural cavity filled with fluid, and the withdrawal of a sterile Luer hypodermic syringeful of this fluid proved it to be purulent. Under light chloroform narcosis, as much of the pus was removed as was possible, using a large aspirating-needle. When the thick pus refused to flow out of its own accord, suction was made with a large Luer syringe. (The Luer syringe, with a large "slip" needle, is much handier to use than a metal syringe with threaded needle.) When most of the pus had been removed, between 6 and 8 mils of the formalin-glycerin (named above) was injected through the same needle, the needle withdrawn, and the puncture sealed with collodion.

A week later, a second puncture was done and the contents of the pleural sac again were evacuated. This time, the pus proved to be quite thin and watery, and not nearly so large a quantity was present as at the time the first tapping was performed. Between 10 and 12 mils of the Murphy fluid was injected this time.

After another two weeks, the patient was again examined, and only a small amount of fluid was demonstrable. A puncture was made and a small quantity of clear serous fluid was withdrawn and a small amount of the formalin-glycerin (about 4 mils, as I recall it) was injected. No further accumulation of fluid ensued. At the time of each of the aspirations, a dose of the combined stock bacterin, as described under the treatment of bronchopneumonia, was administered in the usual manner.

Intelligent All-around Treatment the Need

This case illustrates very well the statement that I made at the beginning of this series of papers, that bacterin-therapy is not a cureall in infections; but, rather, when used in conjunction with other indicated forms of treatment, is a valuable and often indispensable adjunct. In this case, neither the bacterin-therapy nor the surgical treatment alone would have been sufficient to effect a cure; their simultaneous employment, however, formed the happy combination necessary to effect the desired result.

In the class of cases just discussed, an alterative and sorbefacient remedy, as well as

a systematic antiseptic, is useful, and iodine admirably fulfills the indication. It may be given in the form of the U. S. P. tincture of iodine, diluted with two or three times its volume of glycerin, and further freely diluted with water; or, as this preparation is at times somewhat of an irritant of the gastric mucosa, calcium iodide may be used instead.

It probably is superfluous to add that the bowels must be kept active by the use of, preferably, calomel and soda, followed by saline laxative.

When the lung has been much compressed for some time before the fluid has been removed from the pleural cavity, a vigorous effort must be directed toward the expansion of the compressed and, in some cases, atelectatic lung-tissue. When the child is old enough to do so, one should have him blow the water from a bottle closed with a tightly-fitting rubber stopper pierced by two tubes, after the fashion of the well-known washbottle used in chemical laboratories. In the case of younger children, they should be given some toy wind-instrument, such as a horn, to blow.

"Mixed Infection" in Pulmonary Tuberculosis

Any physician at all experienced in the treatment of pulmonary tuberculosis realizes that the chief danger to the patient is *not* from the tubercle-bacillus, but, rather, from the hordes of secondary bacterial invaders, to which the specific bacillus of tuberculosis has thrown open the door. Were phthisis pulmonalis strictly a *tuberculous* process, it would, in most cases, be a more prolonged and less grave condition than it is. It is to the *secondary*, or "mixed," infection that the hectic fever, night sweats, and rapid emaciation so characteristic of the disease are due. The lowered resistance brought about by the "mixed infection" in turn makes easier the spread of the real tuberculous process, and so, a vicious circle is formed, hurrying the unfortunate victim to an untimely end.

The benefits of a normal, outdoor life, with abundant easily assimilable nourishment, for these sufferers from the "great white plague" are so manifest that they need no argument in their favor. Concerning the relative virtues of creosote, iodine, calcium salts, and so on, in the medicinal treatment of pulmonary tuberculosis we, each of us, have our personal beliefs and preferences. As to tuberculin-therapy, I have not had a sufficiently extensive experience to qualify me to speak with any authority; however, there is one phase of the treatment of this scourge of mankind which we may, with profit, discuss in connection with the subject of "mixed infection".

The secondary invaders most commonly met with in pulmonary tuberculosis are, in the order of frequency (according to Allen), the streptococcus, micrococcus catarrhalis, pneumococcus, bacillus of influenza, micrococcus tetragenus, and staphylococci (albus and aureus). Diphtheroid bacilli, Friedlaender's bacillus, the bacillus proteus, and the colon-bacillus sometimes are present, but much less commonly than the foregoing ones. It, thus, is seen that the bacteriology of "mixed infection" in phthisis is quite a varied one; consequently, a bacteriologic or at least a microscopic examination of the sputum should always be made, if possible, in order to determine what varieties of microorganisms are present in a given case. No amount of care can be too great in this terrible disease.

The Choice of the Bacterin Used

Were I the unfortunate victim of active tuberculosis, I believe I should want an autogenous bacterin prepared from the various secondary infecting agents found in my sputum, as it would—theoretically, at least—most nearly meet the demands of the situation. However, until such an autogenous bacterin could be prepared, I would not hesitate to make use of a stock bacterin containing the predominant organisms found in the majority of cases, namely, the streptococci, micrococcus catarrhalis, pneumococcus, influenza-bacillus, and the staphylococci. The dose of the streptococcus and pneumococcus is from 30 to 60 millions each; micrococcus catarrhalis, 50 to 75 millions; staphylococci, 100 to 200 millions of each variety.

The production of an excessive negative phase must here be studiously avoided; hence, it is well to begin with a rather small dose; then, if no marked improvement follows, increase the dose by, say, 50 percent, and continue to do so until a favorable response is obtained. At first, the dose should be small, and the intervals relatively short, say, three or four days; as improvement takes place, the intervals may gradually be lengthened to a week or ten days, and the dose considerably increased.

The inhalation of the vapor of some antiseptic combination, sprinkled on wool or cotton inside a "respirator" or "inhaler", has an undoubtedly favorable influence in combating the mixed infection. Such a mixture may well consist of equal parts of phenol, tincture of iodine, creosote, and alcohol, to

which a small amount of menthol has been added.

While I shall not attempt to take up the question of tuberculin-therapy, I cannot refrain from giving utterance to one word of caution. If you decide to employ some form of tuberculin or tubercle-bacterin, *do not make the mistake of using too large dosage.* All authorities are agreed that the initial dose should be *very minute*, indeed; this gradually to be very cautiously increased, but always avoiding a pronounced systemic and focal reaction. Should any reaction manifest itself, it means that the dose has been too large, and it must at once be reduced to a safe level.

Much harm has been done in the past, and much undeserved discredit has been cast upon tuberculin-therapy, by the injudicious employment of excessive dosage. In spite of the warnings of the great Koch, at the very beginning of this form of therapy, enthusiasts jumped to the conclusion that, if a little was good, a great deal would be better; and, as a consequence, much damage was done, some patients even were killed, and undeserved discredit was cast upon a really valuable remedy, and harsh criticism upon a truly great man; once again, progress was arrested by unreasoning enthusiasm and equally unreasoning condemnation.

[*To be continued.*]

What the General Practitioner Can Do in the Treatment of Chronic Diseases

By George F. Butler, M. D., Kramer, Indiana
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[*Continued from February issue, page 124.*]

Chronic Bronchitis

THE climatic and hygienic treatment for chronic bronchitis is the same as for tuberculosis. Breezy localities are to be avoided, wool should be worn next the skin, and the patient should pass as many hours as possible in the open air where there is plenty of sunlight. He should eat, drink, exercise, rest according to a plan laid out by his physician, to meet the special conditions. The possibility of fecal toxemia must be eliminated by the emptying of the bowels, disinfecting them and keeping them clear and clean. Anemia, scrofula, and other general dyscrasias must be looked for, and remedied if present; elimination by bowels, kidneys, and skin should be tested and raised to the proper standard, while digestion and nutrition are maintained close to the normal point. Then there remains the pulmonary problem. We have two principal forms, dry bronchial catarrh and bronchorrhea.

Dry Bronchial Catarrh.—Here the cough, which is excessive and harassing, may be moderated by small doses of emetine (the pure alkaloid, mg. 1-4, or gr. 1-256.) given every hour as long as nausea is not induced. Irritation thus is allayed and secretion of normal respiratory mucus incited. In addition, iodoform, mg. 1, gr. 1-64 may be given repeatedly during the day, preferably one hour before, or two to four hours after meals; and to each dose of this, may be added zinc cyanide, 1 milligram or cicutine hydrobromide, if there is thoracic pain or pronounced reflex irritability. If it becomes necessary to employ any opiate, it should be narceine, allowing 1 milligram to dissolve on the tongue. As a palliative and as a means of checking the morbid processes and setting up those that tend to heal, the inhalation of steam is useful or the atomizing of menthol or of thymol iodide dissolved in liquid paraffin. An aid to allaying irritability is, counterirritation over the pneumogastric nerve along the neck.

When the spasmodic element is marked, lobeline is a good substitute for emetine. In order to induce sleep, gelsemine may be required during the evening, 1 milligram every half hour until "dose enough".

Bronchorrhea.—Here, there is a profuse discharge of mucoserous, gelatinous or purulent expectoration. The formation of pus may be stopped by saturating the patient with calcium sulphide; atropine checks the serous discharge; and 1 Gram of calcium lactophosphate daily, in divided doses, restores the relaxed and fragile cell-walls to a condition that enables them to retain the serum. In colliquative forms, this is especially valuable. It is harder to control the gelatinous discharge, but all forms are restrained by iron, myrrh, oil of cinnamon, and especially by copaiba, the latter given in very small doses, in order to avoid irritation of the

stomach. Large doses stop the discharge, leaving the mucosa dry and tumefied, and the patient feels easy only when the effect has passed off and the discharge reappears. Ergotin or strychnine arsenate in full doses will check the discharge temporarily. Sprays of oil of cinnamon dissolved in any bland vehicle also are useful.

When the sputum becomes offensive, creosote, phenol or oil of turpentine should be employed, both internally and in sprays. The spray must be used very frequently if gangrene is feared, in which case zinc phosphide, 1 centigram before meals, also is required for inciting vitality.

Catarrhs of the Mucosae.—Rhus toxicodendron and uva ursæ are especially valuable in disease of the genitourinary mucosa, and they have more or less efficacy in the bronchial catarrhs, when given in small doses and for long periods; and there are other remedies which are believed to exert a beneficial influence over the mucous structures specifically, helping them to cast off the disease and to resume their normal functions.

Success for the practitioner in this, as in every other chronic catarrhal malady, begins with learning the chief factors of the case, continuing with an intelligent choice of remedies and persistent treatment, never forgetting the importance of proper hygiene.

In considering other therapeutic measures to be employed in the treatment of chronic bronchitis, faradization or galvanization of the pneumogastrium is of great value. One sponge electrode should be placed at the side of the neck, and another between the sternal ends of the clavicle, moving the latter from there toward the epigastrium. The effect may be aided by vibration of the cervical region of the thorax and over the chest-wall generally, the strokes being light and rapid. This treatment should be repeated every day for ten or fifteen minutes at each sitting. A negative static spray frequently is of value in cases of intrathoracic congestion, while a simple static insulation often relieves spasmodic coughing. In most cases, general elimination through the skin should be enforced two or three times each week. The alternate effects of exercise (walking, rowing, swimming, horse-back riding, etc.), are often of marked efficacy. An autogenous vaccine should be tried: it often hastens recovery.

Nervous Asthma

A paroxysmal neurosis is one of those nervous actions so common in the economy of man, like epilepsy, some forms of insanity, migraine, and probably asthma. These nervous actions, which in their essence are not abnormal, become so by excess of energy or of frequency and eventuate in habitual intractability. Therefore, the disease must be taken in the earliest stages and arrested before it becomes confirmed. We may gain some control over the convulsions of infancy, keeping them at a distance, sometimes, and thus preventing the child from becoming an epileptic; but, if epilepsy once becomes confirmed, it is exceedingly difficult to cure.

A parallel case is that of asthma. It is held that this is a disease of childhood rather than of adult age, and that to realize this fact and follow its suggestions is, to accept the best possible chance of stopping the attack and preventing the fixation of a habit that will establish chronic asthma. It is almost as hard to cope with the chronic asthmatic as it is with the chronic epileptic.

There are two methods of dealing with asthma. We may, on the one hand, endeavor to make the environment of the patient conform to the requirements of the individual or, on the other hand, we may try to harden him, widen his range of accommodation, and thus render him less susceptible. Of drugs, we may give him sedatives directed to the oversensitive nerve-structures concerned or we may give those which will raise the general nerve action to such a degree that the perceptive centers will take less notice of their unnatural conditions.

First, regarding the palliative measures. When called to a patient in the stress of a paroxysm of asthma, it is so evident that the condition should be arrested as quickly as possible that the treatment of this symptom almost always usurps first place and distorts the perspective. As the quickest relief is afforded by the inhalation of some fume, as of saltpeter, nitrite of amyl or chloroform, by an injection of morphine, or by a dose of chloral, I find only too often that the patient is in the habit of using patent fumigating powders and thus sacrifices the proper treatment of asthma to immediate relief of the paroxysms. Grateful for the small mercy of temporary freedom from discomfort, the victim becomes comparatively easy in mind regarding the future, assured that he carries protection in his vest-pocket.

The danger of this temporizing, however, is considerable. Though this plan invites temporary ease, it is a disastrous procedure, for, it creates a "habit" and by worrying the cardiac ganglia tends to cardiac dilatation. Furthermore, "hothouse" treatment is bad.

as it nurses the patient's power into debility, with the inevitable result that the first time he puts his head outside the door he catches a fresh "cold", when back again he must go to his bundle of external precautions. If asthmatic attacks are to be prevented at all, this is not the way to do it.

For one thing, abode in a proper climate is necessary. Though it is very much easier to offer destructive criticism of this kind than to point out a better way, I believe that there is no doubt that the first requirement for the asthmatic patient is, to seek a climate in which he can remain much in the open air. It is true that we know little about climate, while asthma is so individual a matter that nobody can foresee with much certainty whether this place or that locality will prove suitable for a given person, and, when the issue seems doubtful, experiments in moving the patient from place to place are not wholly satisfactory. Still, there can be found for each of these sufferers some locality favorable to him, and there he should be sent, for a time at least. It may be by the sea for one person, inland for another, in a dry country, in a humid one, and in many instances the air of cities will be the very best for the purpose, the most generally favorable being that which is smoky and dense. But, whatever this favorable air may be, the patient should be out in it with very little restriction, for it will render the morbid circuit less prone to engender discharge. Besides, he should be encouraged to pursue the various healthful outdoor sports and games.

As to the diet, it is so easy a matter to prescribe restrictions in foods so numerous and complicated that the case is made worse rather than better by this precaution; so that it should be said of the dietetic regimen: "Be careful as to what you eat, but not too careful". An attack of asthma often appears to start from a meal that has not been properly digested, one that may have been too large in quantity or of an improper character, or taken at some improper hour, and the point to aim at is that of good, plain, light food, moderate as to quantity and to be ingested slowly. Any food that is plain, wholesome, and known not to disagree with the patient may be allowed, and the chief meal should be taken early in the day, when the digestion is most vigorous. Breakfast; lunch or early dinner should be the main reliance, and what is taken later ought to be of the most digestible kind and small in quantity. In fact, all meals should be small ones for the asthmatic, distention of the stomach being harmful. The idiosyncrasies of the patient must, of course, be considered.

The Drug-Therapy of Asthma.—In considering the treatment of this affection with drugs, two divisions present themselves; namely, those medicines which are intended to prevent asthma; and those which are useful when the attack either is threatening or actually is in progress. A further distinction must be made between the cases that appear to be purely nervous asthma: those in which there is any degree of persistent bronchial catarrh, and those already mentioned, which occur later in life and may be attributed, on the one hand, to blood conditions that, for convenience, we may call gouty, and on the other, to the degenerative changes in the tissues.

So far as the pure form of asthma is concerned, there is, in my opinion, no drug that equals, or nearly equals, arsenic as a preventive of attacks. It should be taken for three or four weeks, then omitted, then resumed after the same interval of time, and so on for three or four cycles. After that, it should be taken, from time to time, when the nerve-centers show signs of lowered tone from any cause.

Bronchial Asthma

Obviously, less benefit is to be expected from medicines when a persistent bronchial catarrh lies at the root of the trouble. A suitable climate is the best remedy in such instances, a dry and bracing air being most favorable, as a rule. Two drugs, however, often are given with much benefit; namely: strychnine and iodine, the first as a stimulant, possibly of the respiratory center, and the second as an expectorant.

An eliminative treatment is, on the whole, best for the asthma that occurs later in life, it having been found useful to give a dose of calomel, perhaps with podophyllin, followed by a saline laxative; this in conjunction with careful attention to diet. Brine-baths and systematic exercises, such as those elaborated at Nauheim for the treatment of certain forms of disease of the heart, often are beneficial for asthmatics, by stimulating the circulation and facilitating the flow of blood through the lungs. But, to relieve an attack or to relieve the semiasthma that either forebodes or lingers after an attack, we must employ other means. Many drugs have been tried with more or less success, first among which I should put calcium iodide or potassium iodide and chloral hydrate. At

the onset of an attack, grindelia robusta often is very useful, being given every half hour until relief is obtained. Also, the following prescription is very effective:

Ammonii iodidi	Gm. 8	(drs. 2)
Extracti grindeliæ robustæ	Gm. 2	(min. 30)
Tincturæ lobeliæ	Gm. 4	(dr. 1)
Tincturæ belladonnæ	Gm. 4	(dr. 1)
Syrupi pruni virginiani	Gm. 30	(oz. 1)
Aquæ destillatæ, q. s. ad	Gm. 60	(ozs. 2)

Label: Take one teaspoonful three times a day.

Also, because of its relaxant effect upon the bronchial musculature, an inhalation of amyl nitrite at the onset of an attack gives prompt relief; but, the objection to its use is, that the patient soon becomes accustomed to it, so that the limits of safety are likely to be overstepped in the increasing amounts necessary to procure relief. And it is also contraindicated where there is arteriosclerosis of marked type, through danger of rupturing an artery. An attack may often be lessened or even aborted by frequent doses of nitroglycerin (glonoin), say, 0.5 milligrams (gr. 1-128) during the premonitory stage or when the patient has engaged in some pursuit that generally gives rise to dyspnea.

Inhalation of spirit of chloroform combined with other antispasmodics may give relief when nothing else will do so, as the following;

Solutionis magendie	Gm. 4	(dr. 1)
Fluidextracti belladonnæ	Gm. 2	(mm. 30)
Spiritus glonoini	Gm. 2	(mm. 30)
Spiritus ætheris compositi	Gm. 4	(dr. 1)
Spiritus menthæ piperitæ	Gm. 4	(dr. 1)
Spiritus chloroformi	Gm. 4	(dr. 1)

Directions: Take 20 drops on a lump of sugar.

In some patients, an inhalation of the smoke of cigarettes made from dried grindelia leaves soaked in a saturated solution of potassium nitrate seems to lessen the paroxysms and give relief more markedly than anything else can do. The cigarettes may be composed as follows:

Hyoscyami foliorum	Gm. 0.60	(grs. 10)
Belladonnæ foliorum	Gm. 1.20	(grs. 20)
Strammonii foliorum	Gm. 1.20	(grs. 20)
Pruni virginiani foliorum	Gm. 0.60	(grs. 10)
Potassii nitratis	Gm. 0.60	(grs. 10)
Aquæ, q. s. ad	Gm. 15.00	(drs. 4)

Dissolve the potassium nitrate in the water, moisten the leaves and roll into 10 cigarettes; smoking three or four of these daily.

Again, a piece of blotting-paper may be soaked in a saturated solution of potassium nitrate and potassium chlorate, dried, and burned, the patient inhaling the fumes

In severe paroxysms, when seeming to threaten life, a hypodermic injection of the following will secure quiet:

Morphinæ sulphatis	mg. 8 (gr. 1-41)
Atropinæ sulphatis	mg. 5 (gr. 1-128)
Nitroglycerini	mg. 5 (gr. 1-128)

Wrapping the chest in a hot mustard pack, at the same time giving a hypodermic injection of hyoscine, morphine, and cactin, will bring quick relief.

Adrenalin is highly recommended by many for the relief of the paroxysms, but in my own experience the results have been similar to those following the use of the asthma-powders—though there is immediate relief, the dyspnea recurs more and more frequently and severely, until the effect refuses to appear. At present, I should leave the employment of this drug an open question.

Secondary Asthma

Dyspnea may be brought on by exertion in the presence of chronic bronchitis, large latent pleural effusions, in convalescence, and in obesity, being especially persistent when there is a dilated and fatty heart, and increasing as the circulation fails. The relaxants usually are valueless in all these complicated asthmas, when the dyspnea is largely spasmodic, although in part dependent on material obstructive lesions.

But glonoin affords certain and speedy relief, which usually may be confirmed and maintained by the simul aneous administration of hyoscyamine, pushed just up to the first indication of physiologic effect, in sharpness of speech or dryness of mouth; and to this, it is always advantageous, to add strychnine arsenate, which arouses the vital forces, bringing the reserves into action. The doses should be small and frequently administered, until the desired effect is obtained. A good prescription is: Glonoin, 1-4 milligram; hyoscyamine, 1-4 milligram; strychnine arsenate, 1-2 milligram; given together and repeated every ten to thirty minutes till effect. By applying mustard or ice over the right pneumogastric nerve in the neck, the antispasmodic action may be aided.

The observations of Lerch, tracing, as they do, a connection between asthma and persistence of the thymus gland, as also between asthmatic tendencies and splanchnoptosis, have presented a new and interesting subject for study; thus serving to illustrate the truth expressed by Gross, that we always should treat any abnormality which we may detect whether or not we can trace any connection between it and the given malady. Also, it

shows that our diagnostic powers are widely increased by the employment of the X-rays and other modern methods.

Other Forms of Asthma

Atypical Asthmas.—The term "asthma" must not be restricted to essential asthma, nor even to the dyspneas attending abnormal conditions of the respiratory tract. Those asthmatic conditions which proceed from cardiac and circulatory diseases are equally true spasmodic neuroses, and not explicable by the mechanical conditions. Any dyspnea in which the spasmodic element predominates must be regarded as a form of asthma.

Emphysema.—Here, there is a diminution of pulmonary aerating surface, but the difficulty of oxygenation is also enhanced by the spasmodic element which so frequently develops. This is also the case in fibroid infiltration; and comparatively small tuberculous deposits may induce asthmatic symptoms out of all proportion to the lung tissue affected.

Anemia.—In maladies involving a loss of hemoglobin, the dyspnea is constant rather than paroxysmal, although, as in all forms of asthma, the paroxysm is likely to be precipitated by exertion. The more marked the spasmodic tendency, the slighter the physical effort required to arouse it.

Renal Asthma.—In cases where the asthma occurs in patients whose kidneys are not eliminating sufficiently or whose blood is poisoned with fecal toxins, the asthma may presage impending uremia. The form known as "air-hunger", seen in diabetes, foretells coma.

The following measures are applicable to the attack itself, but not to the condition: galvanization or faradization of the vagus for ten minutes. (Very effective.) Percussion of some of the respiratory centers located in the spinal cord. (Percussion may be produced by tapotement, by means of a percussion-hammer, by a powerful interrupted douche (preferably cold), and by static sparks.) Derivation to the lower extremities by means of any one of the methods I have formerly mentioned, including Father Kneipp's plan of walking in the wet grass. Thoracic gymnastics (Swedish method), as I have already described them, the object being, to intensify and prolong inspiration and shorten expiration. Thermic shocks may be safely administered, when the heart is sound, through a plunge-bath, which often is remarkably effective in breaking up an attack, although not wholly without danger. All general reactive applications of heat and cold follow the same rule.

Reflex Asthma.—The term "nervous irritation" admitting, as it does, of very wide application, may serve to conceal our ignorance of the fact that some form of auto-intoxication obtains, the asthmatic attack being due to toxemia which affects a nerve-center or a nerve-trunk. Frequently the vagus is the direct seat of irritation, and sometimes asthma coexists, or alternates with other neuroses, like epilepsy, angina pectoris, and so on. Also, asthma has been traced to the presence of nasal polypi and their interference with respiratory functioning. Menstruation also sometimes gives rise to it. Of course, psychic factors play their part in this affection. The relation of asthma to certain metabolic disorders, as gout, skin diseases, rheumatism, is well known.

In each case, the therapy must, of course, be suited to the particular cause. The removal of the nasal polypus, the healing of the dilated stomach or the prolapsed bowel, the toning up of the heart's action, attention to the therapeutic indications in renal diseases etc., will relieve the gout, the rheumatism, whereupon the asthma will disappear.

Asthma and Tuberculosis.—It is known that because of the passive congestion of the lungs found in asthma a victim of asthma scarcely ever contracts tuberculosis, which, as a rule, does not develop wherever there is chronic pulmonary congestion, such as heart disease, renal trouble, chronic bronchiectasis, and so forth. This is a classical example furnishing the therapeutic indication for Bier's hyperemia in such a variety of conditions. Bier's hyperemia induced by a suction-mask has been found of considerable value in some cases of pulmonary tuberculosis.

Failures in Treatment.—These will be due to renal insufficiency and toxemia. The asthmatic attack should be regarded as a warning that the kidneys, liver, and colon must be investigated, to heed which is, to avoid an error all too common, namely, that of treating the symptom to the neglect of the cause. It is the persistent failure of liver and kidneys to eliminate their full quota of solids that imports, and not merely the loss of a little albumin. A daily output of 80 Grams (1200 grains) of urinary solids dropping to 20 Grams (300 grains) is a serious matter. The applomb of many an attending physician has been severely disturbed when an asthma which had resisted all his remedial efforts, has been ended accidentally by a free catharsis.

[*To be continued.*]

The Doctor as a Factor in the World's Progress

By V. E. Lawrence, M. D., Ottawa, Kansas

THE most important necessity in human advancement is mental and physical health, and the most important factor in obtaining this necessity is a knowledge of hygiene, of the etioligy of diseases, and of the science of therapeutics.

The history of medicine is, to a large degree, the history of the advancement and the improvement of the world. Ignorance, poverty, disease, and death are largely synonymous.

While empyrical medicine is as old as the human race, the science of medicine commenced with, and was a cause of, the first steps in civilization.

Disease in the past clothed itself in mystery and superstition and declared itself an invincible enemy, which dare not be attacked, a monster into whose domains it was sacrilege to enter. It stalked forth as a pestilence by day and a terror by night. Before its presence, men fled in dismay. Ten thousand fell on its right hand and hundreds of thousands on its left. Kings and princes were as nothing in its sight, and whole cities faded away before it as the morning dew. Nations were decimated by it, and only its own exhaustion was a bar to its progress.

Medicine in those days was scarcely worthy the name of a profession.

And, yet, even then there were men possessed of those essentials of the great physician, namely, acute observation and accurate judgment; without which no man may hope to occupy an eminent position in the profession of medicine. These men observed the errors of the times and little by little laid the first stones of the foundation upon which has been reared the structure of comparatively accurate medical science.

First Steps

The first step necessary in this direction was the gaining of at least some knowledge of human anatomy. But this was a book sealed, barred, and locked by ages of superstition, and the man who dared do violence to its unknown secrets became the victim of the vengeance known only to ignorance. Like the thief in the night, bold and enquiring minds broke these hitherto unmolested barriers. The light of science broke upon this unknown region. The secrets and wonders there revealed inspired in the minds of these brave pioneers a zeal and enthusiasm no longer to be daunted by opposition and ignorance. The wonderful processes of respiration, digestion, assimilation, disintegration, elimination, and last, but not least, of circulation, the anatomy of the central nervous system and the organs of special sense—these vast territories of undiscovered knowledge were at last thrown open to human investigation and occupancy, to become the foundation upon which the centuries yet to come were to build the scientific edifice which has since become the chief corner-stone of human happiness and success, the stone upon which nations rise and upon which armies depend for victory, the stone upon which rests the advancement, mental and material, of human society and human progress.

The science of physiology was a natural and legitimate offspring of the science of anatomy. Men able to break down the opposition of their times regarding the dissection of the human body would not be slow in advancing to the next great step in medical science; namely, the study of the functions of the body. The bars once thrown down, other adventurous minds hastened to enter.

Science is a thing of slow growth. Its dawnings were tardy and its progress was made with slow and uncertain steps. Ignorance opposed its advancement at every point and attacked it with cruel and unrelenting energy. The human mind is slow to grasp and investigate scientific knowledge, and the learned often are reluctant to accept it even when clearly demonstrated. The centuries, slow as they were in following on another, still were more rapid than was the advancement of well-established scientific knowledge.

The Curse of Ignorance

During these dark centuries, disease held unopposed dominion. The ignorance of the people was the avenue over which it traveled from city to country and from nation to nation. When human liberty was almost unknown, every man claimed the privilege of carrying his infection to his neighbor. No restraint was put upon the free intermingling of the people. Laws relating to hygiene and

infection were unknown. The etiology of disease was an unborn science. Dissections and postmortems were felonies. The most unreasonable ideas were held regarding the causes and treatment of diseases. During these long years, the percentage of mortality was alarmingly high and the average longevity of mankind far below the present.

The bubonic plague of Athens, in 164 A. D., had a mortality of from 55 to 90 per cent. In some villages, every person attacked died. In 1570, 200,000 died in Moscow. In 1636, 10,000 died in London. In 1704, 283,000 died in Prussia.

References to smallpox can be traced to the earliest records. Its ravages depended only upon the number of the population. Medicine has no greater triumph than the discovery of vaccination by the immortal Jenner. In times past, smallpox claimed for its own more victims than did all other diseases combined, while now it has the least of all important diseases.

Scarlet-fever and typhoid fever also have had their day of triumph, and diphtheria has not failed to claim a high mortality among the children. But all these hitherto unrestrained forces of human suffering and death have seen the day of their unrestricted malignant power pass away.

Light Breaks Into the Darkness

The doctor of today looks upon all diseases as his legitimate prey and now meets them in open field and open combat, and many of them have been disarmed or so disabled as no longer to be the cause of alarm and confusion, as in the ages past. True, consumption and cancer still hold their sway, but the forces for their destruction are being marshaled and it is not too much to hope and believe that ere many decades they, too, will be well within the grasp of scientific medicine.

Armed with the anatomist's scalpel, the chemist's test tube, the microscope, and the x-ray, together with the more accurate and extended knowledge of therapeutics, the doctor has become, to a surprising degree, the master before whom disease must bow and to a large extent disappear. To him, the world is indebted for this. Banish his skill, and progress ceases. Neglect his advice and admonitions, and the glory and grandeur of the nations pass away. His science, of all others, is the science preservative, and his advancement is the forerunner of all other progress.

From the earliest times, men, in the practice of regular medicine, have been leaders in science. Jenner, Harvey, Darwin, Huxley, Virchow, and Lister are but a few of their names. The doctor is, indeed, a factor in the world's progress.

Not only has the doctor held his own in comparison with that of the legal and clerical professions, but from this time on he will scarcely have a peer. The time when the medical profession can be used as a refuge for the incompetent is forever past.

A great revolution has followed the published report of the committee, whose duty it was, to investigate the ability of our medical colleges to send out finished products in the shape of new doctors. That report meant the almost instant death of some fifty stock-company medical colleges. It meant also a combination of many insufficiently equipped ones into others at least fairly equipped. It meant a classification of all colleges into A, B, and C, with a decree that only M. D.'s who held diplomas from the two former were eligible for examination before state examining boards.

All this means that only men of the best intellectual ability and with the most industrious and persevering qualifications can hope to enter, remain, and make a success in the profession of medicine. No other profession compares with it in the expense and difficulties for its preparation, and the time is at hand when the medical profession will have within its ranks a higher average of intellectual ability and professional attainment than can be found elsewhere, and the profession will take a place in the esteem and respect of the people second to none.

This also means that the doctor, whose chief capital and professional asset is his tact in pleasing the people, will become a thing of the past. The farmer knows his neighbor who works with antiquated implements, but, unfortunately, it is not so easy to detect the doctor who treats his patients with antiquated therapy. The people will learn to employ the doctor whose skill will cure. They will learn to distinguish between the halfway nurse, halfway doctor, whose function is rather to comfort than to accurately diagnose and scientifically prescribe, and the doctor who, forgetting these "tricks of the trade," has applied himself to his profession until he relies, as a basis of success, upon his competency as a physician, and not upon his success in covering up his long years of failure to keep up with his profession. When the incompetent is barred from the profession then these tricks of the indolent and incompetent will cease. Doctors will

compete upon their skill and not upon their starvation fee-bill.

Medicine, during the past fifty years, has advanced so rapidly that only men of ability and unceasing industry have kept abreast of the profession. The doctor who, after graduation, ceases to study, soon falls into a state of mental atrophy which forever prevents his being able to take an honorable place in his profession. The mind, like the body, must have daily labor to acquire mental muscle. The lazy mind, like the lazy body, degenerates into soft and flabby mental incompetency. Like the weakling in the harvest field, he staggers and trembles at his task of diagnosis and therapy while his patient goes to the grave because of lack of that mental vigor which a competent physician could furnish. Such a man is helpless and hopeless. These words are not addressed to him, but to the young man whose future is still before him and whose industry can prevent his becoming the dangerous member to his profession which uch men always are. Only mental work can produce mental vigor.

An Old Doctor's Life Story

An Autobiography

By Robert Gray, M. D., Pichucalco, Mexico

[*Continued from March issue, page 1003.*]

Back to Business

I PROMISED to do my utmost to help the distressed girl, but refused to accept any of her proffered cash, resolving to add five hundred dollars to her father's bill.

I have never seen anything in woman more superbly grand than that girl appeared while she was listening to my encouraging words. I was older then than when the Aurora of the mountain-vale flung the gossamer of her magnetic charm over me like the spell-work of the Magi and Peri of ancient days, but the pathetic Chula was as innocent as was the angelic Corinne of thought or purpose to enthrall me by the scintillation of love-light smouldering in the embers of despair in those glorious black eyes of sorrow. To her, I was the immaculate high priest of undefined and undefinable hope. But all that had to end. The aunt came in and the girl merely told that she had secured my best interest, with the refusal of a penny of money.

When the father returned, he invited me to the office for settlement. He wanted to pay me $1000 more than I demanded, because of my promptness in coming and unflagging activity of attention to the sick daughter. But this I declined, as I was paid almost doubly my customary charges for similar services and under like circumstances, though that was the most distant visit by ten leagues I had ever made.

I omit the farewells, which I avoided early in life when there was a long period of separation impending. No bereavement ever saddened me more painfully than tearing myself away from those I loved to be absent for years—to Paris—to the Civil War! And I felt a sympathy for poor Chula that caused me to reluct to leave her to such a shrouded future.

The Sleep That Is Twin of Death

When back in my office again, I pondered many ways and means by which I might rescue that girl from her impending peril, but none of them seemed practicable.

While I studied in Paris, some experiments were made by scientists with criminals condemned to death, with the object of achieving the result that Friar Lawrence attained with Juliet. Romeo and Juliet being on the Paris boards, the scene of the taking of the drug by Juliet and the death-scenes of Romeo and Juliet created an intense sensation in Paris. Doses that suspended animation for four or six hours produced stagnation little more positive than a powerful anesthesia, but ten hours was so near lethal that none but a medical man would have recognized that life remained. When, however, the dose was increased so that resuscitation did not supervene in fifteen hours, medical interference proved futile and dissolution followed.

Some years before the period of which I have just written, and in one of those periodical revolutions, before the government of Diaz, three Mexican soldiers were sentenced to be shot near my office, whom the second officer in command desired to save however. He came to me to learn whether there were any way to put the condemned men in a state of suspended animation that might appear

to be death to a superficial observer; the brigade surgeon would report death, he being disposed to aid the effort to save the men, or let them die under the influence of whatever might be apportioned them with the design to thwart the sentence, since the families would much prefer this to the execution even in face of the stigma attaching to suicide more seriously in catholic countries than elsewhere.

Knowing the execution was a monstrous outrage planned by the commander, I prepared the compound that was used by the French scientists in the experiments named, gauging it to be on the safe side of a six hours' narcosis. I told the officer to instruct the surgeon to report that the three men were dead as a result of poisoning by cabelunga—the latter being a small fruit almost as deadly as strychnine, which no one would question as having killed the men, if they ate of it. Meanwhile the friends were there with coffins to remove the corpses from the scene of execution that was to take place at sunrise. But, the surgeon no more than had announced that the men to be shot had committed suicide, when an alarm startled the camp, about an hour before daybreak, it being reported that the rebels were making a flank movement on this position.

When I got out of bed that morning, the army was gone and I heard no more of the affair until after that particular revolution had been suppressed. Then the colonel, to whom I gave the potion, wrote me that it had worked like a charm, the friends of two of the three narcotized men, thinking they really were dead, had prepared to bury them, but the effect had passed off in five, six and seven hours, respectively.

About a month after leaving young Chula to her unhappy existence, there came to me a young American doctor, who presented a letter from an old Confederate surgeon requesting me to help the young man in finding a practice that he might be able to handle. The letter was a passport with me, and I immediately recalled the commission of the father of Chula, to send him a doctor. So, without delay, I put the young medic through a coaching course, with a view to initiating him in the rudiments of "improved medication"—as I then termed the therapy practiced by me—by means of the active principles. What I told him was all a surprising revelation to him, but he took to it with alacrity, going my rounds and passing sleepless nights as just then an epidemic was raging. By and by I casually mentioned the experiments in Paris and the exploit with the three condemned men. Of course, he wanted the formula for that potion, but this I had to refuse, as I was bound in honor never to divulge it.

Eventually the young man set out on the long ride over the mountains, bearing my letter of introduction to his prospective patron. I had cautioned him seriously about the girl who was engaged to be married, warning him that the slightest imprudence on his part, out of the straight professional line, would ruin his prospects and set him adrift unrecommended in a strange country.

But what, instead of heeding my well-meant advice, did Young Hopeful do, with true American dare-devil vim, but plunge head and ears in love with the fair Chula, and she as rashly reciprocated this vagrant sentiment, though reigned by a stiff curb, to safeguard her precious flame from the suspicion of the father and the vengeance of the detested lover. Thus things went on, and the wealthy planter appreciated the young doctor so highly that he aided him in acquiring cheaply a nearby little ranch, with a good house on it, which, with the aid of some Chinese laborers, he converted into a veritable paradise.

Thus time glided along like a summer-night's dream, during which neither my young doctor nor his morning star of hope had sent me even slightest greetings, until the time for the dreadful nuptials was alarmfully near. Naturally, I had not written to the young woman, to indicate the plan I had devised for her escape; for, I was satisfied that the young doctor would become involved in the subtle labyrinth of her enchantment and be more than likely to make a botch of trying to escape with her.

I had no doubt about the girl. The doctor was really fascinating and in all probability would have made an easy conquest had she been as free as the larks that flitted over the crags of her coast. Then, what was to be expected of her, in her great and odious thraldom, but that, like a drowning man, she would clutch at any straw drifting within her reach. And Doctor Duncan—that was his name—was not a feeble straw. Possibly the harassed girl would have grasped at one even far less promising, in the sheer hope of escaping the horrid fate confronting her. What, moreover, rendered the doctor more precious to her was, that she had won him, as it were, on the slippery verge of a frightening precipice, and the danger she had flung around him, that might submerge him in irremediable ruin, while rendering her herself

still more helpless than she had been, by having trusted to a delusion for safety.

A Modern Juliet

Then, one morning there arrived a strange courier, who handed me a package containing a letter from Doctor Duncan and also one from the perturbed Chula. The Doctor made a clean breast of it, and then proceeded to ask whether I was not sufficiently expert in my knowledge of human nature to have known the impossibility of escape from the peril to which I exposed him, without warning. He had gone and done just what I had told him not to do, helplessly

> Like the bird whose pinions quake,
> But can not fly the gazing snake.

The fellow had fallen desperately in love with Chula at first sight, but resolved to conceal his passion; and he might have succeeded for a long time, had she not made it clear to him that she was in the same plight. Hence, love's electric current began to vibrate and to ignite his soul from the sparks flying from the flashes of her lovelit eye. He was her slave. She was the slave of her father, helpless as a dove in the falcon's claw.

The Doctor told me of the thousand and one plans they had formed, then rejected, to leave the plantation and the country, with one chance in a hundred of not being overtaken by the irate father. And he wound up by supplicating a dose of the sleep-potion that I had prepared for those condemned soldiers, believing it possible to impose upon the father and the people of the place the belief that the daughter had succumbed to the deadly plague, which rendered her interment immediately necessary in the dusk of the same evening to prevent the rest of the terror-stricken people from being smitten—a task that the Chinese laborers could perform without risk, they being immune. Then, under the cover of ensuing night the same Chinese could remove the young woman from the cemetery to the Doctor's house, whence she might be spirited away, in disguise, in safety. All that part of his plan seemed feasible enough; yet, it made me shudder to become a party to any such scheme, and I almost repented having told my friend anything of the subtle charm of a fictitious death, which might turn out real.

All these reflections passed through my mind before I had read Chula's letter—which I dreaded to see, knowing well the pledged claim she had on my assistance, and how she would urge its fulfilment, for I had a startling sympathy for her dark fate. Her letter ran as follows:

"My dear Doctor Gray: I suppose you regard your promised assistance requited in the sending to me of Doctor Duncan, and your conception would be correct many times over were not the same grim situation menacing me ever. The doctor will have told you the dilemma in which I have involved him without bettering my own helpless thraldom which he cannot ameliorate unless with a risk to himself (besides me) that I cannot permit him to venture, even though I should dare it undaunted all alone. Truly, the rapture of pure, spontaneous love, such as he bequeathed me, has compensated for much of the bitterness of despair in the past; yet, I see and feel

> ——— the dungeon wall and floor
> Close slowly round me as before!

No avenue of escape with such a noble, glorious companion to guide me is open.

"He has told me you are master of a potion that makes a sham of death, that might render my escape possible. You refused him the knowledge of it, and he believes you will deny it again, as you are under a pledge and an oath of honor never to divulge its formula. But, dear Doctor Gray, you may send the dose all ready prepared without infringing upon that sacred obligation binding your tongue. This I importune, under the uncanceled promise you made me, your convalescent patient—the sanctified compromise of the noblest bosom that throbs on earth, the refined intellectual medical hero, whose heart thrills and aches with convulsive sympathy for hearts in misery. And you know the acuteness of my mental wretchedness is far more intolerable and deadly in its slow and sleepless agony than was the burning fierceness of the fever from the immolating grasp of which you rescued me.

"Pray, dear Doctor, do not pause, do not halt under the check-rein of restraining scruples. What I ask is my last and only refuge. Doctor Duncan tells me that you have loved and lost and are bearing about over the earth with you in silent loneliness sorrows too poignant to be told in words. You may fear that I may not revive. Banish that apprehension from your calculations. If I die, it will be in a heroic effort to save myself, not actuated by the unworthy motive of self-destruction. Know you that I wear in my bosom a tiny vial of deathly potency, to serve me as the final refuge, the last night of my freedom from that horrible enslavement to which I never can submit. The terrible

abhorrence I have of suicide thus far has restrained me from thus ending my anguish, for fear that I might never then meet the spirit of my mother in the better land.

"So, then, good Doctor, you may send me the coveted potion without remorse of conscience, assured that my prayers and blessing will ever accompany you, if I live, or, should I die, that you have saved me from the terrible crime that might yet be mine, the same as a patient sometimes dies under the influence of medication designed to save his life. Not doubting that my prayer will be granted, I remain thankfully, your obligated friend."

The Ruse Succeeds—Chula Rosa Is Rescued

The coveted narcotic potion went out from my reluctant hand.

Not long after that fateful day, I read in a Mexico City paper that Chula Rosa Carmen, the heiress of a wealthy ranchero in the State of Pichucalco, had died of some mysterious plague that was said to kill in less than an hour after the attack and which caused her to turn black in the face and made her swell up fearfully soon after death ensued. These details I understood to have been part of the alarmful subterfuge of the doctor, in all of which comedy the pious aunt of the girl no doubt was a prominent actress in order to prevent the father or any other person from even entering the room. The aunt, naturally, was present at the moment of the presumptive death and also the only person other than the doctor and the Chinese pallbearers permitted to accompany the corpse to the grave, while the aunt and the doctor were quarantined in the house of the latter fourteen days, they being the only persons exposed (or at least, such was my suggestion in my letter to the doctor) in order to keep people away from his house, in case his exhumed and revived treasure should be secreted there.

Strangely, I never had any tidings from my friend, which puzzled me to a degree, and at last I wrote to the municipal president (the equivalent of the mayor of an American village), in whose jurisdiction Doctor Duncan had lived, asking if he knew anything about him. This was some six months after I read of the death of the girl. The reply came that the doctor had sold his place and, with his Chinamen, had sailed away some months before.

This eased my mind to the certainty that the girl had withstood the ordeal and that the twain had gone to the States or to South America, taking the hoard of United States treasury notes with them. And the more I thought of the singular incident, the less I was surprised at the guarded silence of both the doctor and the girl. What more was I to them, if they had what they wanted—each other? There was peril to them even to think aloud of the flight and its antecedents, and ever so much more in committing even a mere hint of it to paper to take chances in an uncertain mail to convey it to its destination.

Chula Rosa was dead, dead to the father, dead to the dusky lover—the only people importantly interested in her disappearance, in her native home—and the adventuring doctor had coined a fortune in cash and gained as life-companion, the peeress of any woman he ever could have gained as wife in any land. Neither of them had any reason to fear the aunt or Dr. Robert Gray, the only persons in the wondrous secret that they carried away with them from the Land of the Aztecs. The good aunt undoubtedly was with her brother, striving to console him with the homily that "the ways of Providence are beyond the ken of man;" while Doctor Gray was roaming the jungle and marshes, striving to cope with the angel of death anywhere that hope had fled.

This story of the girl, mortgaged from infancy to a man unworthy to be her coachman, and that of the one recounted earlier in this recital, who was dead on her true lover's lap and in his arms, to where I was called to make an autopsy, and the stories of yet others, in which I did not participate but was familiar with the mournful endings—all these but stereotype the monstrosity of wedding girls forcibly to men loathsome to their finer sensibilities and delicate predilections, from distracted Juliet on down to this age of ours. Can parents not see how this brutal practice entails conjugal wretchedness when the hapless victims do not escape through the no more gloomy portal that opens to the sable bridge of death!

[*To be continued.*]

What Others are Doing

THE EMETINE AND OTHER TREATMENT OF PYORRHEA

Considerable difference of opinion prevails as to the value of emetine hydrochloride for curing pyorrhea; some dentists condemn it, others are extremely enthusiastic in its praise. The truth probably lies midways: when used in the right way and in the right kind of casēs, emetine will effect a cure. A conservative and, yet, optimistic statement of its place in the therapy of pyorrhea is made by MacDonald in the January number of *The Dental Cosmos* (p. 65), who writes as follows:

"The use of emetine hydrochloride recalls Dr. James Truman's early treatment by packing the pockets with quinine. The similarity of action of the two drugs would account for the successes in his treatment, in view of the work done by Smith and Barrett and by Bass and Johns.

"Emetine has given me such excellent results in several cases that I consider it a very valuable addition to the drugs used in the treatment of pyorrhea. Sometimes it has failed me and sometimes its results have been almost dramatic. Sometimes, injected intramuscularly, it has acted well, and in other cases local use has produced better results. Combined with treatment by ionic medication, it has given me good results. Occasionally the injection into the arm (I generally inject into the deltoid muscle near the insertion) is followed by some soreness, a small hard lump persisting for some days. In one case, the injection apparently irritated a cutaneous nerve, as a herpetic eruption appeared. In the majority of cases, however, I have not had any disagreeable results. The local soreness may be in great part avoided by kneading the site of the injection, to disperse it more rapidly. I always sterilize the skin before the injection. Do not use emetine in the case of an alcoholic, if you wish to avoid nausea, and so on.

"Another precaution necessary is, to avoid the use of emetine, even locally, during the menstrual period, as it is likely to check the menstrual flow. Just how it acts in that manner, is difficult to explain; but, emetine is a drug the therapeutic possibilities of which are not yet thoroughly understood, and I only can refer in this connection to its similar striking results in hemoptysis, as reported by Flandin to the Medical Society of the Paris Hospitals, and published in *Le Monde Médical.*

"I know that many dentists have already abandoned the use of emetine, because they apparently have not obtained the expected results in every case, and their doubt as to the pathogenicity of the ameba has thus seemed to be confirmed. On the other hand, I think Bass and Johns lay too much stress upon the ameba as being alone responsible for pyorrhea. We might cite dysentery as a parallel example in medicine. If all cases of dysentery were treated with emetine alone, the drug would fall into disrepute. The reason for this is that we recognize two forms of dysentery, amebic and bacillary, and the particular form present must be diagnosed before the correct treatment is decided upon.

May not one form of pyorrhea be due to a pathogenic ameba? I venture the opinion as a result of many successes with emetine. But I emphasize the fact that instrumentation must be a part of the treatment. Occasionally I have obtained good results in an obstinate pyorrheal pocket with a paste of hydrargyri iodidum viride and glycerin packed into the pocket, and then leaving a twist of cotton saturated with glycerin in the pocket for a few hours. The benefit of this treatment I attribute first to the antiseptic power of the drug, combining the action of iodine with that of mercury, and second, to the glycerin inducing an osmotic flushing of the pocket with fresh serum. As the dose is only from 1 to 3 grains, care must be exercised in using hydrargyri iodidum viride.

Where a pocket persists in spite of all treatment we should be sure that a dead pulp is not adding to our difficulty, or, if in the upper jaw, that the pocket is not connected with the antrum, as in the cases reported by Underwood in the *British Medical Journal.* Immobilization of a loose tooth is helpful if the method used does not involve impingement

on the gums or favor lodgment of food débris. All hopeless teeth should be extracted.

I prefer vaccine treatment where any systemic effects of the pyorrheal condition are in evidence. Here, again, vigorous local measures should be used at the same time, for it seems unreasonable to leave a septic and irritating mass about the teeth and expect good results from a vaccine. I prefer to use a mixed autogenous vaccine. Vaccine treatment and the use of glycerin locally seems to me an ideal method, for we are thus flushing the pockets with fortified serum.

TREATMENT OF GRIP-PNEUMONIA

It is refreshing to find occasional articles in medical literature written by well-known clinicians, leaders in their chosen profession, that run counter to the extreme and mistaken assertion that drug-treatment is useless in most diseases, more particularly so in pneumonia. Fortunately some men there remain, experienced, and acknowledged to be careful and well-trained observers, who defend the use of drugs, properly chosen and employed, singly or in combination; thus supporting the position commonly maintained by the general practitioner, that drugs are not useless.

Doctor Beverley Robinson, of New York, has contributed much of value to medical literature, more particularly on subjects of internal medication. He is one of the leading clinicians to prescribe drugs with confidence, because he prescribes them rationally.

In *The New York Medical Journal* for January 20, Doctor Robinson presents a brief article on the treatment of grip-pneumonia—which, as he puts it, is most efficiently treated by preventing it. For this purpose, he declares, he knows of no remedy equal to ammonium salicylate, provided it is properly given, in sufficient doses and at an early period. The drug should be prescribed in capsules or in solution. If in capsules, it is best combined with caffeine, a dose to be taken every two hours; if in solution, the addition of caffeine also is indicated, a carminative menstruum and corrective, such as peppermint-water sweetened with syrup of tolu, serving as the solvent. The solution is preferable for young patients. In beginning the treatment of grip, it is Doctor Robinson's custom to order two capsules every two hours, each capsule containing 3 grains of ammonium salicylate and 1-4 grain of caffeine. Five or six doses usually may be given with good effect; later, two capsules should be taken every three or four hours.

As a preventive of grip, when prevalent or when having been exposed to it, two of the capsules taken three or four times in twenty-four hours, for one or two days, is desirable dosage. Occasionally good supplementary action is secured by a capsule containing 2 grains of quinine taken at mealtime. Doctor Robinson believes that the hydrochloride of quinine agrees better with a sensitive stomach than does the sulphate.

He also continues to prescribe his old favorite inhalations of beechwood creosote, that is, in the beginning of attack, when the patient suddenly experiences chilly feelings, fever, depression, and cough. For this purpose, an ordinary croup-kettle is filled with water and kept simmering in the room. The creosote may be dropped upon the surface of the water, 5, 10, 15 drops at a time, to be repeated as necessary. The windows are kept open, to assure fresh air, although drafts must be avoided.

When stimulants or heart tonics are called for, only two are worth considering, namely, strophanthus and old brandy. The strophanthus should be given, in small doses, every two hours, and in conjunction with a teaspoonful or tablespoonful of the brandy or the same amount of vichy-water, icecold.

The strong and important point made by Doctor Robinson is, to caution against too much meddling with pneumonia-patients, especially deprecating unduly frequent examination of the lungs, which can be of no particular value, while wasting the patient's vitality. Of course, the bowels must be kept open. The nourishment should consist of fermented milk, beef-juice, panopepton, light broth of chicken or mutton, jelly, eggnog, curds, and the like; a little hot well-made tea or coffee frequently is useful; dry champagne also is helpful. Frequent oxygen inhalations, if given without causing fatigue to the patient, will lessen dyspnea and relieve cyanosis.

THE ACTION OF DIGITALIS IN PNEUMONIA

There are clinicians who doubt that digitalis exerts a favorable influence upon the heart in pneumonia and in other acute infectious diseases in which a severe strain is imposed upon this organ, and some years ago Lauder Brunton expressed the opinion that when there is a high temperature digitalis

completely loses its power of slowing the heart through the vagus. In the United States, this view is shared by Hare, who teaches that the characteristic action of digitalis does not occur in the presence of fever. On the other hand, the drug is commonly prescribed by German clinicians in pneumonia.

In order to arrive at a decision of this moot point, Alfred E. Cohn and Ross A. Jamieson (*Jour. Exper. Med.*, Jan., 1917, p. 65) carried out a series of clinical experiments with 105 pneumonia-patients treated in the hospital of the Rockefeller Institute, 49 of whom received digitalis, mostly given by mouth, while the other 56, getting none of it, served as controls. The drug was administered in the form of tablets of digipuratum, in a daily dose of 0.4 Grams, and its action was observed by electrocardiograms, taken, as a rule, once, but sometimes several times, a day. Without entering into great detail of the authors' discussion, their conclusions are of interest.

These observations seemingly demonstrate that digitalis, when given by mouth, does influence the heart of persons having pneumonia; this action being evidenced by changes occurring in the auriculoventricular, conduction-time, as also in the form of the T-wave of the electrocardiogram, precisely as they do in the non-febrile heart. It, further, was found that the pulse rate of a fibrillating and fluttering heart falls under the influence of digitalis in the presence of fever, in the same manner as it does in non-febrile cases. Altogether, the authors hold that, under the circumstances, the action of digitalis upon the heart in pneumonia is a beneficial one.

Their conclusions can be given briefly as follows: (1) Digitalis acts during the febrile period of pneumonia; (2) it produces a beneficial, possibly lifesaving effect in cases of auricular irregularity (fibrillation and flutter); (3) whatever beneficial action it exerts on the function of the normally beating non-febrile heart, may be expected to follow also from its use in the febrile heart in pneumonia.

THE TREATMENT OF FELONS

"It is a curious fact that in every walk of life the majority of us strive to do the big things, with the result that some of the simpler, obvious, everyday things are treated lightly or are totally ignored." In support of this observation, Dr. George M. Dorrance, writing in *The Annals of Surgery* for December, 1916, points out that almost without exception the numerous patients, in private practice as well as in surgical dispensaries applying for the cure of felons, are merely told that "the condition is not serious." Some local application is made at first visit or a poultice ordered, and if, later, suppuration occurs the felon is lanced. This routine form of treatment, the author asserts, often results in the loss of a part or all of the distal phalanx.

Some time ago, Doctor Dorrance undertook an elaborate study of the anatomy, pathology, and treatment of felons, and his experience has suggested a rational treatment that has been followed by very satisfactory results. It is as follows:

An incision starting at the base of one side of the nail is extended in the line of the furrow over the tip of the finger, down the other side to a point on a line with the beginning of the incision; in that way, making a flap of the tip of the finger.

During the first forty-eight hours, the appearance of the finger after the flap is made often is a source of worriment to the patient and to the unexperienced operator. This is the critical stage in the treatment and on no account should the drainage be removed and the flaps returned to their original position. The final result, it is confidently asserted, will not be any deformity. For a week or ten days, the operator may regret what he has done, but, if the directions are carefully adhered to, the scar will scarcely be noticeable.

The wound is dressed with physiologic saline solution. The dressings are removed daily, but the drainage is not disturbed until the third day, when it is permanently removed. Keeping the parts moist by soaking the finger (with dressing left intact) every third hour in the salt-solution affords comfort to the patient and aids drainage.

The author points out that the most common mistake made is, not to make the incision close enough to the nail. This is essential for preserving sensation in the tip of the finger. In order to assure success, the operation must be executed early, and the incision must be made in the manner as above outlined, and not longitudinally, so as to insure proper drainage. The felon must be thus treated within the first forty-eight hours, to get the best result. In cases of over seventy-two hours' standing, the bone usually is damaged. As a rule, nitrous-oxide anesthesia is advisable.

The length of time required for regaining perfect function depends upon the time elapsing before the treatment is instituted, but it

is quicker by this method than by any other tried by the author.

PEMPHIGUS NEONATORUM

That pemphigus neonatorum is due to the infection with a peculiar type of staphylococcus, probably a strain of the staphylococcus aureus, but indistinguishable in cultures and biologically from some other strains of staphylococcus, is the conclusion of F. H. Falls, who, in *The Journal of Infectious Diseases* for January, 1917, p. 86, reports upon an extensive series of experimental tests.

This staphylococcus, Doctor Falls declares, has fulfilled all of Koch's laws with respect to this affection; which disease, therefore, he thinks, should be called "epidemic staphylococcic vesicular dermatitis of the newborn."

The epidemic nature and possible fatal termination of the disease makes its early recognition and active treatment highly desirable. Doctor Falls believes that the infection spreads by contact with infected material and that the portal of entry is the intact skin.

IMMUNIZING AGAINST RHUS-POISONING

In the issue of CLINICAL MEDICINE for September, 1916, Dr. J. M. French presented an ingenious method of immunizing patients against poisoning by rhus toxicodendron, which has proven very successful. The advice is that persons who are exposed to contact with this plant are to chew and swallow one of the fresh crown leaves (or other tender leaflet) of this plant. That this method of prophylactic treatment is in line with the modern researches with respect to allergy [From Greek: *allos*, other; *ergon*, action; hence, antagonization], (or, protein sensitization) and with treatment upon this basis, is shown by a recent statement made, at a medical meeting, by Dr. J. F. Schamberg, of Philadelphia (*Jour. Am. Med. Assn.*, Jan. 13, p. 87), in discussing several papers on eczema, to the effect that for some time he has been experimenting with dermal reactions produced by certain protein extracts. Among other things, he said:

"Many persons are susceptible to certain external irritants, by reason of an inherent susceptibility which others do not possess. One man may be highly susceptible to poison-ivy, for example, while his neighbors may be insusceptible to it. I recently saw a girl of fourteen who, for three or four years, has suffered from several severe attacks of ivy-poisoning each year; perhaps three months of each year were spent in recovering from these attacks. I determined to try to immunize her, so, ordered a 1-percent tincture of rhus toxicodendron, of which she was to take 3 drops after each meal, gradually increasing the dose. At the end of one month, she was taking 60 drops after each meal. Since then, she not only has been able to pass poison-ivy at close range, but also to touch it, without bad effect. The result was so striking that I expect to follow this method in other cases, and I hope that some of those present will give it a trial."

TREATMENT OF RHUS-POISONING

An interesting symposium upon rhus-poisoning appears in *The New York Medical Journal* for November 4. The winner of the prize offered for the best essay is Dr. Melville A. Hays, who basing upon the fact that the noxious principle of poison-rhus is an acid (namely, toxicodendric acid), recommends sodium bicarbonate as the remedy of greatest value; for, this alkali neutralizes the acid, while also possessing the property of saponifying light oils and certain fats. Since the causative agent of this form of dermatitis, according to Hays, is both an acid and an oil or oleoresin, sodium bicarbonate (which destroys the oily principle) would seem to meet the indications. It should be added that late investigators deny that the toxic principle is either an acid or volatile, asserting that it is a fixed oil known as toxicodendrol.

The method of using this remedy is as follows:

The affected parts are well sponged with a cold saturated solution of sodium bicarbonate, then covered with gauze thoroughly moistened with the same solution, the moist condition being maintained by means of an impervious covering and by the occasional rewetting of the dressing. The face or other parts of the body where it is difficult or impossible to retain dressings may be sponged with the solution at frequent intervals or a thin paste made of the bicarbonate and cold water may be applied. Since hair is turned a dirty-brown color by a strong solution of sodium bicarbonate, diluted Burow's solution (solution of aluminum acetate) or a 1 : 10,000 solution of mercury bichloride may be substituted for use about the forehead, chin, and lip. In the case of children with whom it is difficult to retain dressings while they sleep, the solution may be applied at frequent intervals during the day and replaced during

the night by a 5- or 10-percent aqueous solution or ointment of ichthyol; the same method being applicable for grown persons when appearance is of no importance.

A number of other contributors to this symposium also suggest the use of sodium bicarbonate, which seems to be a favorite remedy. Among the numerous other suggestions for local application we may mention phenol solution, magnesium-sulphate solution, and laundry-soap (the suds to be allowed to dry on); while, after the acute symptoms have subsided, as also for use over night, flexible collodion, zinc-oxide ointment, and diachylon ointment (half strength) are recommended.

RADIUM TO CONTROL PAIN

Malignant conditions of the breast and of the pelvic organs, when they have passed beyond the operable stage, are particularly distressing for two reasons: one is, the constant and agonizing pain that seems to resist all measures, except increasing the dosage of opiates, the other being, the obnoxious odor and the acrid discharge of the lesion.

In a brief communication to *The American Journal of Obstetrics and Diseases of Women and Children* (Jan., 1917), Dr. D. C. Moriarta expresses the opinion that the victims of such hopeless conditions ordinarily receive very little consideration after the hopelessness of their disease has been recognized, adding that these patients are always in the most deplorable state, mentally, physically, and socially.

Doctor Moriarta points out that radium is the one remedial agent that may relieve all these distressing symptoms. After its application, the pain is materially relieved and there is, moreover, a willingness on the part of the patient to omit the use of the opiate; at least this has been the experience of others.

Radium also possesses the power to correct the disagreeable odor accompanying the breaking down of cancerous tissue. This is a very great boon to the patient, as well as to the household. Further, radium controls hemorrhage.

A synopsis of six case reports, which the author presents, of inoperable cases of cancer shows that the pain was relieved by means of radium, the odor was markedly controlled, hemorrhage was arrested, and there was a change in, or a disappearance of, the local pathological tissues.

However, in using radium, it must be remembered that it is possible to produce a toxemia that may prove fatal. The author suggests two precautions when applying this agent; namely: first, a patient with a low leukocyte count should not be given prolonged applications of radium; and, second, when radium is used, this should be in conjunction with the liberal administration of alkalis. In his opinion, no case of this kind is so desperate and no postoperative condition so hopeless, but that radium should be tried, with an expectation of the alleviation of the distressing symptoms.

PAPAVERINE AGAIN

Macht (*Arch. Int. Med.*) finds that, by its direct action upon the heart-muscle or its intrinsic ganglia, papaverine causes a marked increase in the tonicity of that organ, slightly slowing the rate and increasing the output. It is a powerful dilator of the coronary arteries, and it lowers general blood pressure, chiefly by directly dilating the blood-vessels, especially the splanchnic and peripheral. While slightly narcotic, papaverine distinctly stimulates respiration, and is a bronchodilator. It relaxes all smooth muscle-tissue, including strips of intestine, bladder, uterus, and excised pyloric sphincter.

Further, papaverine is a general analgesic, of nearly one-fourth the strength of morphine, but much less of a general narcotic. Subcutaneous doses of from 40 to 80 milligrams are quite safe. It relieves pain better than will codeine, but less so than morphine. It has proved efficient in most cases of cardiac dyspnea, relieved troublesome cough in an advanced consumptive habituated to heroin, and in a case of aneurism strikingly ameliorated a cough not influenced by any other drug. A case of bronchial asthma was relieved immediately. The relaxant power of this neglected alkaloid was shown in biliary-duct spasm and in pylorospasm. In two cases of ureteral calculi, it was introduced, with successful effect, into the ureter by means of a cystoscope. Its use is suggested in angina pectoris and in arterial hypertension. Pal has given it to abort uremic crises. It should replace morphine when depression of the respiratory centers is to be avoided.

These statements are highly significant. In the opium, itself, the action of its papaverine is lost, as it is not present in such proportions as to prevent its being completely masked by the other dominant alkaloids. We have repeatedly urged that opium is a storehouse of valuable weapons, which will never be available until they are extracted

in purity and studied separately. Here is where we heartily agree with those who declare that morphine is not all of the opium. Surely—and we urge that the something-else in so many drug-plants be separated and put at our service, besides the principal alkaloid. We want codeine besides morphine, brucine besides strychnine, hyoscine besides atropine, and so through the list. Take the last pregnant sentence in the quotation from Macht—how often have not we, and you, longed to avail ourselves of the powers of morphine, but did not dare depress the respiration further!

The opposition to the alkaloids is not based upon superior knowledge, but on an inferiority so decided that the objectors have not yet begun to appreciate the meaning of the truths to which they object. They are intellectually on a par with the wiseacres who termed paleolithic arrowheads thunderstones, ignored the Illinois prairies because they "did not grow trees," and looked on the tomato as being poisonous.

MERCURIAL STOMATITIS FROM CALOMEL

While instances of calomel-poisoning are not frequently reported, this condition generally used to be believed to be consequent, mainly, upon the ingestion of vegetable acids (lemon-juice, vinegar, etc.) at a time when calomel had been taken; an explanation, however, that has been disproved by more than one chemist, careful testing having demonstrated that calomel is not converted into the bichloride of mercury by the vegetable acids. In the *Paris Médical* for October 14, 1916, Dr. A. Satre declares that accidents of this kind are very rare, if they occur at all; and that they can be prevented very easily. He has never seen a case of poisoning that could be attributed to the formation of corrosive sublimate from calomel. Still, he reports a number of cases of calomel-poisoning that are of interest.

The first of these cases occurred several years ago. A woman 60 years of age, who had been subject to Bright's disease for twelve years, had, shortly before, had an attack of the intestinal form of grip, and had received 8 grains of calomel. On the day after taking this dose, severe pains and inflammation, which gradually involved the entire mouth, developed at the insertion of the molars. Also, the mouth, which showed wide and bleeding plaques on the gums and cheeks, emitted a stench that pervaded the entire apartment. The teeth were loose, the gums swollen, and there was intense salivation, particularly at night. There was severe diarrhea, with black fetid stools; the temperature was normal; the urine contained a small amount of albumin; slight edema in the legs was present.

The patient was treated locally, in order to prevent irritation of the kidneys. Mouth-washes and gargles of solution of hydrogen dioxide and Labarraque's solution were prescribed. The patient was ordered to suck tablets of potassium chlorate and to drink mineral water. It was two months before she recovered.

The two other cases of calomel-poisoning are of more recent date. They occurred in two French soldiers, both about 40 years of age, whose kidneys and teeth were in good condition, and who had been given doses of calomel of 5 and 7 grains, respectively, as a cathartic. In both men, a rather severe stomatitis developed. This yielded, in about two weeks, to treatment similar to that named above—mouth-washes and gargles of hydrogen dioxide, and sucking tablets of potassium chlorate. Since eating was difficult, nutrition was impaired, so that both remained invalided for some time after the mouth affection had healed.

His experience leads the author to warn physicians always to remember that when they prescribe calomel they are giving a preparation of mercury. Further, in his opinion, calomel should not be prescribed when a patient has or is suspected of having some renal lesion, so that, with this in view, one should be slow to give it to persons more than 50 years of age. In cases in which the teeth are diseased, where gingivitis is present or where there is an excessive deposit of tartar, calomel should be replaced by some other serviceable remedy.

Whenever Doctor Satre prescribes calomel, he inculcates special precautions in the care of the mouth, such as using a mouth-wash with potassium permanganate or thymol and an alkaline dentifrice. He also recommends a tooth-powder composed of potassium chlorate, 5 drams; sodium borate, 10 drams; calcined magnesia, 10 drams; and menthol, 15 grains.

To the foregoing we wish to add that the precautions laid down by Doctor Satre certainly are called for, if the enormous old-fashioned dosage of calomel in amounts of 5 grains is adhered to, as seems to be the practice abroad, particularly among French and English physicians. CLINICAL MEDICINE for many years has insisted upon the

advisability of giving calomel in small doses frequently repeated, and this method not only has given perfectly satisfactory results as to action, but proved entirely without danger in children as well as adults, including patients whose kidneys left much to be desired. The cases above reported are here reproduced because of the interest attached to them and in order once again to point out the greater safety of prescribing calomel in small doses. In this connection, we are reminded of an article by Hemenway published in *The Journal of the American Medical Association* for March 19, 1910. In this article, the author asserts that, when given in one large dose, calomel produces a cathartic effect accompanied by but little constitutional disturbance. Doses of 1 grain repeated at intervals of one hour, for a period of eight hours, produce a cathartic action plus some extra intestinal irritation and plus a general constitutional influence. Given in doses of 1-10 of a grain two or three times a day, a general glandular stimulation is induced, without special intestinal disturbance.

THE BIOLOGICAL TREATMENT OF OZENA

Ozena is one of the affections the cause of which has been under discussion for many years and even yet has not been established definitely. Years ago, Perez claimed that the coccobacillus which he described was responsible for the affection, but his assertion failed to be accepted generally, and it is only quite recently that confirmatory evidence has been adduced.

In *The Journal of Ophthalmology and Oto-Laryngology* for July, Dr. Charles L. Klenk reports some experiments the results of which demonstrate that the microorganism discovered by Perez really is the cause of ozena, as alleged by the latter. This finding is of considerable importance with regard to the treatment of this affection, which, naturally, is undertaken on biological principles. For the purpose of preparing a vaccine, the author makes cultures of the organisms from the semiliquid portions of the greenish, stinky crusts removed from the nasal passages. When he has obtained a pure culture, a suspension of it in physiologic salt-solution is made. This emulsion then is tested on a rabbit. If the culture is found to be characteristic, a suspension in salt-solution is prepared, and this preserved with tricresol.

Doctor Klenk reports that patients treated with a vaccine thus prepared from their own ozena-lesions have shown very gratifying improvement; in fact, many of them appear to be cured, barring, of course, the atrophic condition of the nasal surfaces.

TREATMENT OF BALDNESS AND DANDRUFF

Chas. J. White of Boston, professor of dermatology at Harvard University, after an experience with 704 cases of alopecia and seborrhea of the scalp, and finding that women are more often affected than men, gives it as his opinion (*Jour. Amer. Med. Asso.*) that of the various lotions, ointments, and soaps, besides internal medication and massage tried by him, the best results were obtained with a preparation composed as follows:

Hydrargyri chlorodi corrosivi.....grs. 4
Euresol pro capillis.....drs. 2
Spiritus formicarum.....oz. 1
Olei ricini..... (dr. 1 to) drs 3
Alcoholis, q. s. ad.....ozs. 8

Label: Wash for scalp. (Poison.) Apply in the morning.

The active ingredient of this lotion is euresol (monoacetate of resorcin). With this, Doctor White obtained gratifying results in many most intractable cases.

HORSE-SERUM IN THE TREATMENT OF WOUNDS

Lignières advocates (*Progr. Méd.*, Dec., 1916) the use of horse-serum in the treatment of wounds. He has found that serum drawn twenty-four hours after the first bloodletting possesses greater curative power than does serum from the latter; a fact probably owing to the regenerating process going on after the first bleeding. Compresses dipped in the serum—which must not have been heated—are applied, and are changed once or twice in the twenty-four hours. If the serum is to be preserved for a while, some phenol (not less than 0.5 percent) should be added.

DUODENAL NUTRITION

Great success in the feeding of patients by means of duodenal intubation (in that way excluding the diseased stomach) has been reported by M. H. Gross and J. W. Held in *The Journal of the American Medical Association*. This expedient deserves wider trial, in the place of rectal feeding. The authors named, however, use the Einhorn duodenal tube, but one of 7 mm. diameter, while they also attach a heavier end-weight, namely one of 10 Grams.

Miscellaneous Articles

Burns and Scalds

A BURN is an injury inflicted by dry heat, a scald is one inflicted by moist heat. The treatment of the two is practically the same and may be considered together. These injuries in most instances are the result of carelessness and constitute one of the three formidable accidents that seldom, if ever, should occur in any home; and these accidents frequently tax the skill and patience of the physician when the victim is a child. When the doctor arrives at the home, he usually finds a terrible hubbub: all the neighbors for a mile around have come in to offer their services; the frantic mother is, in her state of excitement, screaming, crying, and praying for something to be done for her child; one or two anxious maiden aunts greet him at the door, with tear-stained faces, and ask him if he has ever seen anything so bad and if he thinks the child will get well; a lot of sympathetic willing neighbors are offering their services and trying to tell him what Doctor Brown or Smith or Jones did for so and so, or what they had read in such and such cookbook, magazine or almanac; and maybe the fond grandparents alone have not gone into hysterics but have assumed the role of physician and applied all the remedies in the catalog, from axle-grease to tobacco-juice.

This makes a very pleasant scene for the physician, for, he must listen to all present and agree with their suggestions, in order to maintain peace and retain their good will; yet, at the same time he must take charge of the situation and be in command and render the treatment he thinks best. He must be calm and not lose his head; must reassure these excited folk that he has seen many worse burns than that and that everything will come out all right. Then he must put everyone in the house to doing something, whether it be necessary or not, keeping them busy, so that he can collect his thoughts and attend to the patient.

When called to treat an injury of this kind, the attention should first be directed to the relief of pain and to combat shock. For the pain, give a hypodermic injection of morphine and atropine. For the shock, put the patient to bed and make him warm by means of heated blankets, hot-water-bottles, or else immerse him in a hot bath. If needed, give stimulants, such as atropine, digitalin, and adrenalin.

Then for the local treatment. If the burn is extensive, a general anesthetic should be given, after which the clothing is gently removed, all foreign matter (pieces of clothing, cotton, dirt, etc.) should be removed, and the wound made as aseptic as possible. Apply a gauze pad saturated with a 1-percent aqueous solution of picric acid and leave it on for about one hour, after which either one of the following solutions makes an excellent application: (1) gauze saturated with a 2- or 3-percent solution of aluminum acetate; (2) 1-2- to 1-percent solution of chloral hydrate; (3) 1 : 2000 solution of mercury bichloride; (4) saturated solution of boric acid; (5) 1-4- to 1-2-percent solution of chlorazene. This gauze pad then should be covered with oilsilk, to prevent evaporation and to keep the part warm. This dressing should be changed every twelve to twenty-four hours, until the wound is free from infection.

When the wound is clean and sterile, an excellent procedure, and one that promotes healing, consists in dusting over the raw surfaces some compound stearate of zinc, bismuth-formic-iodide or any other approved powder, then applying a sterile piece of gauze upon which has been spread sterile carbolized vaseline (2- to 5-percent strength); or, ichthyol ointment; or a combination of 94 parts of castor-oil, 5 parts, of balsam of Peru, and 1 part of carbolic acid; or, also, sterile carbolized oil, 1 : 40. These are antiseptic, prevent the gauze from sticking to the wound, and permit of rapid healing.

As to the general treatment, the patient should be kept in bed in a quiet room, with plenty of fresh air, and given wholesome, well-cooked, nourishing food. The bowels should be opened with a laxative saline and kept well regulated. The urine should be examined

daily, and the kidneys watched—and stimulated, if necessary. When indicated, give general tonics and stimulants. Always watch carefully for sepsis, pneumonia, peritonitis, and other complications that might arise.

This treatment is very satisfactory and in the majority of cases gives excellent results.

W. W. McChesney.

Abingdon, Va.

[No article on the treatment of burns is quite up to date which does not take into consideration the work recently done, in France, by Dr. Barthe de Sandfort with a proprietary preparation which he calls ambrine. Such wonderful results have been obtained with this treatment that the French government has put at the disposal of Doctor de Sandfort a hospital, where he is now prepared to treat between 400 and 500 cases of burns annually. Numerous magazine and syndicated newspaper articles have appeared in this country relative to this treatment, and it has been taken up by a number of distinguished men, among them at least one prominent member of the medical profession, Dr. William O'Neill Sherman, chief surgeon of the Carnegie Steel Company.

The distinguishing feature about this treatment is, the application of a heated mixture of paraffin, resins, and waxes to the surface denuded by the burn. The paraffin mixture proposed by Doctor de Sandfort is, of course, not in itself a panacea, and other mixtures may be made to do this work exactly as well, maybe even better. As a matter of fact, as least one preparation of this kind has been perfected in America and is now being offered for sale.

The real essentials about this treatment are, that the wax shall be of low melting-point (best at around 120° F.); that it shall be applied hot (at 130° to 150° F.); that it shall "set" immediately after its being applied to the wound; that it shall be highly plastic and sufficiently elastic, so that it will adjust itself and stay adjusted to every irregularity of the surface; and, lastly, that this coating be removed easily and at sufficiently frequent intervals to keep the wound clean.

Before applying this paraffin mixture, the burned surface must be made perfectly dry. This is most easily accomplished by means of an electric hairdryer, which throws a current of warmed air on the surface; however, the same result can be accomplished by dabbing with bits of gauze, cotton or bibulous paper and afterward fanning with a towel or a fan. Now the paraffin mixture is painted or sprayed over the surface at a temperature of 130° to 150° F., as already indicated. When the hot wax comes in contact with the burned surface, the pain is instantaneously relieved. So startling is this change that in the cases which have come to our personal notice the patients who had not slept for days dropped off to sleep immediately. Following the first application of the wax, an exceedingly thin layer of absorbent cotton is applied to the surface, and this, again, is covered with more of the hot paraffin; then a cotton or gauze dressing, held in place with a roller-bandage, is put on. After twenty-four hours, this dressing is removed, and if the coat was properly applied, it shells off without causing the slightest pain to the patient.

At this point, the most startling part of the treatment is developed. As the wound is uncovered, there is unfolded a wonderful multiplication of skin granulations, for, underneath this novel dressing, the new skin forms with a rapidity that is simply astonishing. If but the slightest island of epidermis remains, it becomes a center for growth, and, as a rule, the surface of the burn will be found to be studded with grayish spots of proliferating epidermis.

Under this new treatment, burns will heal up completely which heretofore have resisted all the approved methods, while, strange to say, the vast majority leave no scar.

The explanation of these happy results is, that under the wax shell the surface is bathed in a serous or apparently seropurulent liquid, which seems to afford just the medium required for epidermal cell growth.

Of course, when the wound is infected, as most burns are, it is desirable to render it as nearly aseptic as possible by the application of some mild and slightly irritant antiseptic, such as chlorazene, which may be employed in a 1-4-percent solution.

Having seen several burns, and these very severe ones, treated by this method, and having observed with our own eyes the remarkable results obtained by it, we are prepared to state as our belief that the details given in the magazines are by no means as "sensational" as at first reading they may seem to be. Anyone wishing to investigate this matter further will do well to read the article describing this method of treatment published in the December number of *The World's Work*.—Ed.]

A NEW MEDICAL JOURNAL

With its initial number for March, 1917, *Medicine and Surgery* has entered the ranks

of medical periodicals. Since the assertion is justified that there are already far too many medical journals, a new one might cause a raising of eyebrows and shrugging of shoulders if it were not for the editor-in-chief of the new publication. Dr. Philip Skrainka is well known to reading physicians and even better to medical editors, as the literary editor of *The Interstate Medical Journal* which his erudition and, still more, his clever and trenchant pen contributed largely to place among the important American medical publications.

In assuming the position as editor-in-chief of *Medicine and Surgery*, Doctor Skrainka gives the promise of producing a medical journal that is actually of lasting merit, and this fact alone affords a favorable augury for the new undertaking. We congratulate *Medicine and Surgery* on its editor, and we wish for it and for him many years of useful activity.

TREATING A CASE OF PNEUMONIA

There is a battle royal raging. Let us view the conflict as do officers in command, during an engagement with the enemy. You are to take the fieldglasses and chronometer and report to me the progress of the fray, and I will endeavor to explain each move and why the doctor uses this or that or does so and so.

You see before you a man dangerously sick with pneumonia—high fever involved. You say that the doctor gave him one small granule, and almost immediately after two other granules, and that now he is getting triturates at five-minute intervals. These doses are not swallowed, but just chewed between the front teeth. The first granule given was glonoin (nitroglycerin), 1-250 grain. The two granules following were hyoscyamine, 1-250 grain each. The tablet-triturates are calomel and soda, 1-10 grain of calomel in each; and of these only five are given. They are crushed between the front teeth and the glonoin is absorbed from the floor of the mouth and thus immediately reaches the blood and the terminal nerve-ends, instantly dilating and flushing every capillary in the body, thus relieving the concentrated congestion of the lungs as well as the partial stoppage of blood in the large organs. The hyoscyamine emphasizes and prolongs this capillary dilatation, much to the relief and benefit of the patient. The calomel (in twenty minutes 1-2 grain), finally, manifests itself in bowel cleansing.

What else do you see? The patient is given an enema of physiologic salt-solution, by which the lower bowel is well flushed out. A heaping tablespoonful of epsom-salt dissolved in a teacup of hot water is now given, followed by a glass of cold water. So far this is the only medicine given that has directly entered the stomach. As this is liquid, it will rapidly pass out, so, we are saving the stomach for food and tonics to follow.

Look again! The nurse is bathing the patient. Yes, she has a quart of warm water in which has been dissolved a tablespoonful of epsom-salt. This is sponged all over the body and allowed to dry; which, owing to the high fever, it does quickly. She is now giving a thorough bath with soap and water.

Let me explain. We take in oxygen, we throw off large quantities of carbon dioxide. To retain the latter in the system for any length of time, produces hebetude, lassitude, chemical poisoning. The internal and the external bath of epsom-salt sets free this retained poison. The skin with its 28 miles of skin-pipe has been depurated; the alimentary canal (6 times as long as the human body) has been emptied of its deleterious contents; the blood, drawn away from the congested lung, gives the latter a chance for freer dilatation.

What function do you abuse? I see an ice-cap on the patient's head and the windows wide open. There is a change. There seems to be a stopping of the circulation, lips and finger-nails are blue—yes, that means a blocking of the right heart. A tablet of digitalin is given by the mouth, there crushed, and absorbed as were the other ones. Ah! the cyanosis, the blueness has passed away—this dose has made good. The circulation improves, and all goes on smoothly.

There is cough; also pain, especially on motion and when the patient coughs. Three granules of bryonin are dissolved in half a glass of water and one teaspoonful is given every fifteen minutes till the pain abates. You ask, What is bryonin? It is a glucoside, the active principle of bryonia. It is a most useful remedy in all conditions where the serous membranes are involved or where there is pain on motion or a short dry cough or great thirst. It constitutes one of our "obsolete" remedies, relegated there years ago by our "wise" men, the men who did not know a good thing when they saw it.

However, you could hardly get an Eclectic or Homeopathic physician to consent to practice without his bryonia. Now, if these men can get satisfactory results, why not we? We have all too long been dominated by those who pronounce this taboo. They did

the same thing with regard to emetine, the ipecac alkaloid, which also was relegated to the domain of the pharmaceutically obsolete, until the year 1914, when it blazed gloriously forth in new splendor, a new sun in the therapeutic firmament, the king of hemostatics, an amebicide of high order.

What further do you observe? The sputum is ropy. Some granules are given in the usual way. The breathing and cough grow easier, so does expectoration. These granules are potassium bichromate, 1-6 grain each. They do truly thin the secretion, greatly to the relief of the patient.

What further? There is considerable blood in the sputum. A hypodermic injection is being given Yes, this is emetine hydrochloride, one ampuleful of 1-2 grain. One, or at most two doses six hours apart, will nicely control this tendency to hemorrhage.

If the fever still is high, an enema of physiologic salt solution is given, the action of which is threefold. First, it supplies the circulation with needed fluid, removes a heavy strain from the kidneys, and protects the urinary mucosa in its entire tract. It puts out the fever. In high temperature, the free chlorides are not found in the urine, all being bound up in the raging fire of the fever. When our ancestors wished to put out the fire in the chimney, that so often threatened the destruction of the house, they burned salt in the fireplace. The heat separated the sodium from the chlorine and the freed chlorine extinguished the flames; for, flames cannot exist in the presence of much chlorine. Hence, the pint of salt-water into the bowel every half hour till the temperature falls.

Common salt and epsom-salt: let me introduce these two to you as the new therapeutic twins; let them do your work.

What further? The lungs are full of bubbly sounds. There is froth coming out of the patient's mouth. A member of the family is deeply affected and, retiring to the rear of the house, reports "death-rattles in the throat." What is doing? The nurse has a teacup of something like black coffee that she is feeding him. That is calcium iodide, a tablespoonful of the powder dissolved in 2 ounces of water. A dose, one tablespoonful, every five minutes. What now do you observe? The froth has disappeared, the bubbling sound is gone, the respiration much freer. Yes, the loosely combined iodine has been liberated and through its action the exudate is removed, while the calcium can get busy repairing broken tissue and helping to make new cells. Heretofore, but scant attention has been given to the marvelous work of calcium in lung trouble.

Anything further? Yes, they are feeding him. They give him half a cup of warm malted milk and 1-60 grain of strychnine nitrate every four hours. This they will continue for some days.

How long before the crisis? In the language of the streetgamin, when requested by another gamin to give him the core of his apple, "There aint going to be no core," so in these dosimetrically treated cases there are no crises. The patient is on the highway to recovery in a few days.

This is a synopsis of the rational treatment of pneumonia, to be added to or shortened at the discretion of the physician.

As for the specific treatment of pneumonia, I have in more than one case fought to a successful termination very desperate cases with glonoin, hyoscyamine, and calcium iodide, and strychnine. You also can do this when you get fully acquainted with these great remedies.

C. S. Cope.

Detroit, Mich.

HEADACHE: A CRITICISM

In your January issue, an editorial, entitled "Headache: A Few Suggestions," is not up to your usual standard of thought and writing. Thus, the writer (I hope it was not the Editor) says: "Gould said that all headaches were due to eyestrain," while he "starts with the axiom that every headache is toxemic, and (thinks) it may be long before you encounter an exception."

How much do most of us know about the physiology of the nervous system and how many take into consideration the function of the organism as a whole? Certainly that writer does not; for, if he did, he could see that the same morbid cause underlies the toxemia and the headache, and that they are only "functional nervous" disorders—disordered physiology—and the cause, as Dr. Geo. M. Gould says, is eyestrain. The physician who does not understand that fact does not know his physiology well enough to practice medicine.

The great trouble with so many of us is, that we forget that pathology is only physiology gone wrong, or, if we do remember it, we ignore it or do not know how to look for and correct the *Why*. Doctor Gould knows the Why, because he knows physiology; he is its champion and, of course, will not come into his own in his generation. The medical

mind takes care that its benefactors are killed before their work is recognized. Examples: Jenner, Semmelweis, Holmes. So, let's kill him as soon as we can, if it will hasten the breaking of this great truth into the heavily encrusted mind of medicine.

H. L. Harley.

Pleasantville, N. J.

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[Doctor Harley furnishes an excellent illustration of the truth that I endeavored to present—that each of us sees a part of the truth and, recognizing it to be truth, is liable to forget that it is not all of truth. I purposely left the statement as to toxemia as acknowledging in myself the fault I share with the rest of my colleagues. But, you may note that I stated the matter conservatively—"it may be long"—etc. The eye is a very important part of the human mechanism—so are the ears, the nose, the digestive apparatus—but, neither these nor any other parts equal the whole.—W. F. W.]

FOR THE DEAF

Any person who is hard of hearing can secure literature that may prove helpful to him by addressing the Volta Bureau, 1601 35th Street N. W., Washington, D. C. This bureau does not give medical advice, has no medicines or instruments for sale, and does no teaching.

THE ANTILUETIC TREATMENT OF EXOPHTHALMIC GOITER

How should exophthalmic goiter be treated? I am going to tell you how. Possibly I may throw some light on the subject; probably, though, only add a little more to the general confusion.

Some twenty years ago, a noted German pathologist (I have forgotten his name) asserted that goiter is caused by congenital syphilis; and he gave a very plausible explanation for his theory. So, I said to myself, "If this man is right, then I can cure the trouble," and since then I have been so uniformly successful with my cases that, to my own satisfaction at least, I have proven that theory correct. And, I will add, there is no difference between simple and exophthalmic goiter, except one of degree.

One of the greatest difficulties experienced in treating goiter is, to keep the patients at it long enough to get results. It takes a year or more to cure primary syphilis, and one should be allowed at least twice as much time for the congenital form; so that, if only physicians would recognize this important fact, they would have more success. So, when I take charge of a case of goiter, I always explain this to the patient, impressing upon her mind that her disease was transmitted from her parents and the time for its eradication is indefinite. When you do this, it makes it much easier to hold her to the treatment.

When once physicians come to recognize the nature of goiter, and its easy curability, they will readily see that there is no indication for operative interference whatever, except in cases where respiration is seriously interfered with. Some noted surgeons who several years ago operated in every instance, having discovered that the end result of their work was rather bad, are now hedging, by recommending partial excision only.

In the primary stage of the disease, the treatment is very simple. Give iodine (your favorite form) and pokeroot (phytolacca) internally; beginning with moderate doses and increasing gradually to full dose.

At present, I am using a soluble glycerin solution of iodine, of U. S. P. tincture strength (Windsor Company). I mix 1 ounce of this preparation with 2 ounces of fluid extract of pokeroot. The starting-dose is 15 drops, stirred in half a glass of water, three times a day, this being increased by one drop day by day up to the maximum of 30 drops per dose.

Externally, I use only one prescription for all stages of the disease. There may be other things just as good or even better, but thus far I have failed to find any This is my formula:

Red oxide of mercury (C. P., finely levigated)	drs. 4
Ichthyol (Merck's)	drs. 4
Woolfat	dr. 1
Vaseline	dr. 1

Massage this unguent well into the enlargement twice daily. This is best done by a trained nurse, preferably one who is a good masseuse.

The advanced stage of the disease (exophthalmic) presents a more complex problem in its treatment. These patients always have more or less digestive troubles, and in the case of women nearly always uterine disorders, generally retrodisplacements which, by interfering with drainage, give rise to endometritis, infected tubes, and tender ovaries; these adding a good deal to their general nervousness.

The first thing to do is, to put the patient to bed for a month or more, and in charge of

a good professional nurse. Then comes the "cleanout, cleanup, and keep-clean" procedure—and it is not necessary to tell CLINICAL MEDICINE readers how to go about this. I only will say that colon flushing is much more effective if done by hydrostatic pressure with Tyrrell's "cascade" apparatus. By its use, the water pressure in the rectum powerfully stimulates the pelvic circulation and also greatly aids in restoring the retrodisplaced uterus to more nearly normal position; hemorrhoids are relieved and, if treatment is long enough continued, cured. On the other hand, the colon-tube always aggravates any rectal disorder.

If the colon is tender and there is any mucous colitis, I always order, twice daily, hypodermically, atropine sulphate and strychnine nitrate, both in pretty full dosage; and lately I have added to this course—following the recommendation of Doctor Taylor, editor of *The Medical World*—a 1-4-grain pill of yellow iodide of mercury, taken three or four times a day. This treatment gives excellent results in all cases of bowel torpor and infection.

As soon as the patient's bowels are freed of old débris, I order this prescription:

Tincture of strophanthus.....drs. 4
Strontium iodide.....drs. 4
Strontium bromide.....drs. 6
Solution of peptonate of iron and manganese, enough to make.....ozs. 12
Label: Take a dessertspoonful in water after each meal, gradually increasing the dose to a tablespoonful.

If the patient is very nervous, I alternate this mixture, week and week about, with Forchheimer's goiter-treatment, consisting of quinine hydrobromide, 5 grains, and ergotin, 1 grain, three or four times daily.

For patients who object to large doses of unpleasant-tasting medicine, the following combination will do very well:

Antiscorbutic tablet (Abbott's)
Strophanthin granule, gr. 1-128
Cicutine hydrobromide granule, gr. 1-64
Give one of each kind every two to four hours.

Strophanthus is the best remedy to control the heart's action, the dose to be increased "to effect." However, the heart must not be forced down too rapidly: coax it down gradually, taking time—ten days to three weeks—to get it down to near normal.

This is a partial outline of the treatment that has given me good results. Other remedies of the same nature may be used, of course. Success depends, not so much upon the remedy employed, as on the efficiency and thoroughness with which the treatment is prosecuted.

Did you ever have a patient give you a real good lesson in therapeutics?

Two years ago a young lady came to see me from a town forty miles away. She was 19 years old, a beautiful girl, and exceedingly bright. She had a very marked exophthalmic goiter, and her case is the only one I have ever seen in which there was no bowel or uterine disorder of any kind. She was very nervous; eyes were quite prominent; pulse was 140; and the tumor was large. She said that her home doctors had given her medicine that upset her stomach badly, then they insisted that she must have an operation; so, she became disgusted and came to see me.

I gave her some mild laxative pills and told her to keep her bowels pretty loose; also, I prescribed the strophanthus-iodide mixture, and told her to report by letter once a week and come to see me once a month.

When she returned after the first month there was marked improvement in all symptoms except the nervousness, and she "wondered" if I could not give her tablets instead of the large dose of liquid; also she declared she did not need the laxative pills as they made her weak and her bowels moved freely enough without them. I told her she might omit these, and I gave her the antiscorbutic tablets, two before each meal and bedtime, also some 1-28-grain strophanthin granules to be taken every one to two hours to control her heart.

At the end of the second month improvement was very marked. The exophthalmos had nearly disappeared, pulse was good and below 100, and the tumor was two-thirds gone; but she was just as nervous as ever.

I told her to set her medicine aside and gave her the Forchheimer treatment, one dose every six hours, time to be gradually reduced to three hours. In a week she reported that her nerves were much better but her heart was going faster again. Could she not take the strophanthus granules, too? I assented.

In another week she wrote again saying that the goiter was not going down much since she discontinued the antiscorbutic tablets. Couldn't she take those, too? Again I gave up to her. At her next visit I was very agreeably surprised. Her goiter was gone, her heart action normal, and she was radiantly happy, just bubbling over with good spirits.

"You have it now, doctor," she said, "don't make any more changes in the medicine."

As I am known to be rather bull-headed in having my own way in the management of the sick, it was not very flattering to my vanity when I reflected that she had dictated the entire course of treatment. However, when I thought of the brilliant success obtained, I forgot my vanity. Today, she is one of the best friends I have.

W. A. MARNER.

Miles, Iowa.

PREGNANCY AT SIXTY-FIVE YEARS OF AGE

The following record of a case of pregnancy at a rather advanced age may be of interest: A woman here of 53 years of age now is in her fourth month of pregnancy. However, the mother of this lady was 65 years when she gave birth to her last child, and she was the mother of 25 children by four husbands.

M. E. BOVEE.

Maple Ridge, Mich.

[Can any reader of CLINICAL MEDICINE veraciously equal this report? DeLee says that the latest pregnancy on record is one reported by Kennedy; in this instance the woman was sixty-two years old and this was her twenty-second labor. DeLee delivered a woman fifty-two years old of a seven-pound living infant. In connection with this case the editorial on page 259, this issue, on prolific women will be of interest.—ED.]

OBSTETRICAL NOTES.—VIRTUES OF LOBELIA AND CAPSICUM

Having been reading CLINICAL MEDICINE for a number of years without contributing any of my experiences, I wish, today, to present a few, as observed in this section of the "gulf-coast country."

First, some obstetrical experiences.

The size of the fetus can be controlled by the observance of a proper diet by the mother during at least six months next preceding labor. The child comes lean, but strong and vigorous, and what it lacks in fatness at birth is soon made up, since its birth was made the easier and less injurious to itself. Diet and proper medicines have a very decided effect on the preparation of the maternal parts for labor; so much so that those who usually have long, tedious labors now hardly give the physician time to arrive.

The heaviest and most alarming postpartum hemorrhage that I ever had to deal with was following the largest dosage of pituitrin that I have ever administered. I have as much hemorrhage with it as without its use.

Pituitrin, 1-3, 1-2 or 2-3 mil (Cc.) given hypodermically before labor-pains get too much on the wane, certainly is a great boon in strengthening the contractions and thereby conserving the mother's strength. As a rule, I find that 1-2 mil is the proper-size dose, repeated in fifteen minutes if no action is obtained. If the pains are increased by pituitrin and then start to wane again, and another dose does not seem to have effect, then nature is preparing for a cumulative effect. Keep your chances of action on the safe side at all times. Close observation and experience will afford a good working-basis. Safety first!

After-pains not only are not necessary, but are more or less detrimental to good recovery of the woman. Depressing sedatives do not have a sensible place in their treatment, in most cases. Mix 4 drams of fluid extract of dioscorea, 4 of fluid extract of viburnum opulus, 2 of fluid extract of avena sativa, and syrup enough to make 2 ounces, and of this give a teaspoonful every one, two, three or four hours, as needed to control afterpains. A teaspoonful of the same mixture, three times a day, will also aid involution. A routine of giving a dose of ergot after the placenta is expelled will lessen the tendency of the womb to fill up and cause afterpains.

Teaspoonful doses of fluid extract of erigeron every half hour till hemorrhage stops and then 15 to 30 drops every one to three hours is the best means of stopping uterine hemorrhage, whether postpartum or not. It will succeed where packing fails. Manual compression may be necessary for a time, until the action of the medicine is obtained. If to be used for some time, then its action can be materially strengthened by adding myrica cerifera or hydrastis, or both. I had one case of abortion in which the woman had bled for several days before I got to see her, and she was very pale. I put her on the three drugs combined and thereby held the hemorrhage in check until she had gained enough to have the womb curetted. Otherwise, I am sure, I should have lost this patient.

Where there is a dry birth or where there is a rigid perineum or a small vaginal outlet, I usually pour into the vagina a small quantity of olive-oil in which is suspended some boric acid. Where formerly I had frequent tears, I now rarely see one.

Oftentimes much assistance can be given to the forces of labor after the head has

descended into the pelvic canal, by molding the child's head with the forefinger. This has a tendency to lessen the size of the head, as also the danger of perineal tears.

I do not tie and cut the cord until it has quit pulsating, as this seems to give the baby more blood to start with and consequently makes a stronger one. Circumstances sometimes compel one to do otherwise.

I cut a hole large enough for the navel to go through and thus have several thicknesses of gauze above and under the cord when the binder is put on. This adheres to the cord and acts as an absorbent for its moisture, and natural results follow. Oils prolong the dropping time of the cord; powders dry it too quickly and thereby create a tendency to bleed.

After a curetment, if the uterus is swabbed out with liquid capsicum and myrrh, you will be surprised the next day how little soreness exists, and, later, at the rapidity with which the patient recuperates. If the ordinary tincture of capsicum and myrrh is used, a little glycerin should be added, to counteract the sting of the capsicum.

As a matter of fact, there is no better antiseptic to use on a fresh wound than this mixture, if you want a quick and uninterrupted union.

Here are some medical experiences.

I can see no reason why one should use aconite and other poisons to reduce fever, when fluid extract of asclepias tuberosa and tincture of ginger will do the work naturally and will not take the temperature below normal, nor depress the patient. The depressing effect of most "fever-medicines," to my mind, is as detrimental to the patient as is the fever itself.

Prescription: Mix ammonium chloride and aspirin, of each 1 dram; caffeine citrate, 12 grains. Divide into 24 capsules (No. 2). Give one every hour till the aching stops, then every two or three hours, as needed to keep up the effect.

This will put a case of grip out of business in from six to forty-eight hours, according to the time the patient has had it before taking the medicine. Of course, a good cleanout is essential. Better follow with calcium iodide.

I have yet to lose my first case of pneumonia, and I have treated some after other doctors had refused to continue their care. Two drugs only are essential for the pneumonia itself: lobelia and capsicum. Other drugs may be necessary for a few doses (especially laxatives), but these two will do the work, if given in sufficient dosage. Forget about the printed dosage; give for results. Lobelia must be given in the greater proportion in the beginning, and capsicum after the attack is broken. Subculoyd lobelia is used where the patient cannot tolerate dosage enough by mouth. It is very important to keep the chest *warm* at all times. Calcium iodide makes a very good tonic for after-treatment and to prevent return or relapse.

CHESTER W. HARPER.

El Campo, Tex.

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[Those who are interested in the influence of diet upon the expectant mother as affecting ease of labor should read an article by Dr. Finley Ellingwood, entitled "Painless Labor and How It Can Be Secured," that appeared in CLINICAL MEDICINE, in October, 1914. I believe that this article was subsequently elaborated by Doctor Ellingwood and published in book form. It is rich with suggestions. Write him, care of *Ellingwood's Therapeutist*, Chicago, if you want a copy—as you should.

Doctor Harper's suggestions relative to postpartum hemorrhage are certainly excellent. These cases call for quick thinking and skilful handling. Of course there are many other expedients to be considered, including manual compression, tamponade, and curettage, as well as drug-therapy. For uterine oozings consider hydrastinine. The pituitary solution and ergot ordinarily meet the indications better than other remedies.

Myrrh and capsicum seem pretty severe remedies for internal application following curettage. The best antiseptic we know of for use within the uterus is para-toluene-sodium-sulphochloramide (better known as chlorazene). This is a powerful antiseptic, and it possesses the very great advantages of being noncoagulant of albuminous tissues, while it is virtually nontoxic and noncorrosive.

On the aconite question we cannot agree with Doctor Harper. We know of no remedy which, under ordinary sthenic conditions, will reduce temperature and restore vascular equilibrium so swiftly and so kindly as this old favorite—best given as the salt of the alkaloid, aconitine hydrobromide. There are thousands of readers of CLINICAL MEDICINE who are prepared to back this statement. But asclepias is an interesting vegetable drug which should be more carefully studied.

Lobelia and capsicum were favorite remedies of Samuel Thomson and the botanic school which he founded. Indeed, Thomson, himself, is credited with the introduction of lobelia as a medicine, and in his celebrated

six remedies which constituted the major part of his materia medica, this remedy was "No. 1," while capsicum was "No. 2." The latter we know to be a powerful diffusible stimulant, while the former is a good antispasmodic and sedative. Since the introduction of the alkaloid of lobelia, lobeline, a new impetus has been given to its study. My friend, Doctor Ellingwood, thinks it the most valuable single remedy we have for pneumonia. No doubt it is of value, but we need more data before committing ourselves to so uncompromising a statement. We have had such splendid records of success with the defervescent combinations introduced by Burggraeve that we hesitate to change. But—we are open to conviction.

May we add that bacterins are of great value in pneumonia. The evidence seems conclusive.—Ed.]

A LETTER FROM AN OLD FRIEND

I've been receiving your circulars and reminders during the past five or six years—none forgotten, but simply neglected, put off from time to time. Your last one, of recent date, though, moves me to reply at last. When I courted my wife she said that she had to marry me in order to get rid of me; and, in like way, I'll have to answer you, so as to "get rid of you."

Doctor, for a long time I've thought of writing you. I have read Clinical Medicine for thirteen or fourteen years. To say that I have appreciated it, would but mildly express my feelings. It was like the monthly visits of an old friend. We would sit up together and commune until midnight. I found the old Clinic very helpful in many knotty cases, as it made things so plain and simple. I borrow and read all the old copies I can get hold of and often reread some of the old ones. You can't know how very highly I prize the number you sent recently.

I do not need the journal as a practitioner, for I have been out of the harness for about five years, being disqualified physically and mentally because of old age and the hard work which I endured for fifty years of my life. I am now seventy-eight and feel that I am far along the downgrade of life's journey. My eyes are dim from age as well as disease—my wife says, "Yes, you'll read that old journal till it puts your eyes out." But, I relish it like a boy does his cup of buttermilk and bread.

While I do not practice, still, I occasionally prescribe for some of my family and near neighbors. Thus, for instance, I give calcium sulphide for any and all eruptive disorders and in many cases of enlarged tonsils of children I give calcium iodide for colds and coughs; also, gelsemium (tincture or fluid extract) for nearly all forms of hysteria, painful or spasmodic.

Doctor, did you ever use gelsemium in the latter condition? Try it, if you haven't; you will find it a clinker.

Now, then, be sure to enter my name as a one-year subscriber for Clinical Medicine.

J. S. Eddins.

San Marcos, Tex.

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[This is "just a letter"—one of many of its kind which we receive—but it "heartens" us mightily and we believe other old friends of ours will enjoy reading it almost as much as we did.—Ed.]

AUTOTHERAPY AS APPLIED TO RHUS-POISONING

In the September number of Clinical Medicine (p. 753), we published an article by Dr. J. M. French, who proposed a novel method of treating rhus-poisoning. This article attracted a good deal of attention—for instance, an editorial review of it appeared in *The New York Medical Journal*—and below we reprint a very interesting article upon this subject, which was contributed by Dr. Charles H. Duncan to the same journal for November 4, 1916 (p. 901):

In *The New York Medical Journal* for September 2, 1916, there was an editorial article reviewing an article by Dr. J. M. French that appeared in the August, 1916, issue of Clinical Medicine, in which the writer stated that ivy-poisoning may be cured or prevented by chewing the young leaves of the plant and swallowing the juice. The writer agrees in every respect with the editorial comment on this method of treating ivy-poisoning, which was as follows: "The remedy appears to be in accord with the theory and practice of Dr. Charles H. Duncan, who will pounce upon this case-report as a fine example of his beloved autotherapy."

In *The New York Medical Journal* for December 14 and 21, 1912, the writer stated, in an article under the title of "Autotherapy": "Disease may be said to be the proving of one or more toxins. Symptoms are the expression, or the language, of toxins. *The cure of disease is brought about by placing the exact toxins that cause the symptoms in healthy tissues.*"

This method of treating ivy-poisoning is nothing more nor less than treating the symptoms with the substance that caused them, or an autotherapeutic procedure, and has long been known and employed successfully by the writer, as in other forms of anaphylaxis.

In Fairmount Park, Philadelphia, it was the custom a few years ago, upon hiring park-hands, to instruct them, upon clearing away poison-ivy, to

chew a few leaves of the plant, as a preventive to the well-known cutaneous eruption. Last spring, this autotherapeutic method of preventing ivy-poisoning was introduced in Bronx Park, and several of the workmen employed it as a prophylactic. It is noteworthy that no one who chewed the leaves suffered afterward from poisoning.

Case: C. V., male, living in the country, one evening when defecating in the woods was unfortunate enough to select a spot that was covered with poison-ivy. When seen, three days later, he presented the most terrible spectacle of ivy-poisoning the writer had ever seen. The cutaneous manifestation was severe, covering the whole scrotum, penis, groin, and rectal and gluteal regions. Each testicle appeared to be the size of a fist, and the penis several times its natural size, puffy, and edematous. He was instructed to return to the spot of evacuation and to select a leaf from this particular plant, a part of which he was instructed to chew and to swallow the juice. This he did. There was a reduction of swelling and the symptoms of itching and burning rapidly subsided, so that within three days he was able to resume his duties as butler. The reason for instructing him to return to the spot and chew the leaves of this particular plant was, that there are several species of ivy and in attempting to treat the patient with the tincture from the fresh plant I might have given him a tincture of some ivy other than the one with which he had been poisoned.

The species of rhus that are common throughout North America are rhus glabra, rhus venenata, rhus toxicodendron, and rhus aromatica; the last is the least poisonous. This method of treating ivy-poisoning has long been known and employed by homeopathic physicians, who considered the cures resulting from the treatment as homeopathic cures, till the writer pointed out the fact that it was not a similar remedy, but the exact, or the autotherapeutic, remedy; for, it treats the symptoms with the exact unmodified substance that caused them, and not a substance that causes a similar set of symptoms. Their failures, which they do not always record, may result from giving, as the remedy, a tincture of rhus other than the one with which the patient was poisoned.

In the same way, phosphorus-poisoning may often be cured by giving the patient small doses of phosphorus, often repeated. The failures in this instance may have been from the same cause, but the percentage of cures has been such as to cause it to be widely employed. The remedy given may not be of the exact chemical composition as the poison, often an impure product, while the substance given as the remedy may be, and usually is, the pure product.

Other autotherapeutic measures that may be cited are: Giving the unmodified snake- and scorpion-venom to cure the respective bites, and giving the virus of the mad dog to cure the effects of its bite. Other cures of a similar nature could be cited, where the *exact unmodified substance that caused the symptoms is employed as the curative remedy*. This is the principle upon which autotherapy rests.

APPENDICITIS IN CHILDREN

Appendicitis is not so rare a disease of early childhood as is usually supposed. The practitioner should always keep in mind the possibility of its development. The writer is confident that it is often overlooked.

The disease has been divided by writers into various types, such as catarrhal, suppurative, gangrenous, and perforative. Do not look for these types in making a diagnosis. The child may have one form today and another tomorrow. It is enough to know that it has acute appendicitis.

The following case will illustrate my meaning. A girl, eight years of age, came home from school one afternoon complaining of headache and nausea. She went to bed early. During the night, she suffered from pain in the umbilical region and vomited once. I saw her at 10 o'clock the next forenoon and diagnosed acute appendicitis. I gave a purgative, ordered ice over the appendix, and advised immediate operation; but this could not be done until the following day. By that time, she had improved so much that her parents felt convinced that an operation was not necessary. However, the operation was performed at 3 o'clock that day, just forty-eight hours from the time the girl felt the first symptoms, and everybody was surprised at the destruction of tissue that had taken place; for, the appendix had been perforated and, through the inflammation, had become adherent to the right ovary. There was a quantity of pus in the right iliac fossa and a portion of the intestine showed marked signs of gangrene.

These rapid changes in the child's appendix are due to an excess of lymphoid tissue. It is true that not all cases go on to suppuration and gangrene; nevertheless, it should be remembered that appendicitis in the child is much more active than the disease in the adult. No period of childhood is exempt from the disease. The youngest patient I have had was fourteen months old, but Doctor Kerley tells us that his youngest victim was nine months, while Doctor Shaw reports the case of a baby only seven weeks old. The majority of my child-patients have been between five and fourteen years of age.

That many cases of appendicitis in children go undiagnosed there is no doubt. The reason for this is, because the cardinal symptoms laid down by most writers are not fully developed. Vomiting and pain are the first symptoms named. But, I want to state that these two symptoms are not very reliable to depend upon in the case of children. Vomiting may occur or it may not, while the pain may be exaggerated by some and denied by others. However, we have one symptom upon which we can rely, because it is beyond the child's

control. This is a rigidity of the right rectus, or, in other words, a spastic hardening of the muscle. When there is vomiting, pain of a colicky nature, and tenderness over the abdomen, it will suggest the possibility of the presence of appendicitis. The presence of colic and vomiting, with localized tenderness over the site of the appendix, makes the diagnosis fairly certain. But a rigidity both of the right and left recti, in conjunction with the other symptoms named, makes the diagnosis positive.

A few years ago, I made a diagnosis on the evidence purely of a "spastic right rectus."

There had been no vomiting, although a very little pain was complained of. The child would say to its mother, two or three times a day, "My belly hurts," but in a few minutes would be playing again as usual. There had been looseness of the bowels for part of a day, followed by constipation. The mother brought the child to my office and wanted treatment for indigestion, when a careful examination revealed rigidity of the right rectus muscle.

One factor that makes appendicitis hard to diagnose in children is, that, in the case of many, a careful examination is difficult, and the physician should always try to gain the child's confidence before attempting one. This, combined with attempts at diversion, will generally insure success. The doctor who walks into the patient's room, says "How are you," then proceeds to examine the child, many times will immediately be doomed to failure.

Another thing that puzzled me for a long time is, that the area of soreness, and often pain, on pressure, is far away from the normal position of the appendix. This is generally due to an abnormally long appendix. In one of my patients, a girl of five years, the appendix was 5 1-4 inches long, reaching over into the left iliac region. In a case reported by Doctor Kerley, a boy twelve years old had an appendix 6 inches long, with an abscess in the tip, which was located in the right hypochondrium. In rare cases, the appendix is turned backward and may lie so deep in the pelvis as to exclude tenderness on pressure.

In every obscure case, we want all the help possible in making diagnosis, and a blood count will assist; for, I believe that leukocytosis always is present. Should it be impossible to arrive at a positive diagnosis, do not hesitate to make an exploratory incision. Appendicitis in children is usually of the fulminating type and we cannot temporize with them as we do in adults. If we do, we most assuredly lose our patients.

C. W. Canan.

Orkney Springs, Va.

MISTURA DIABOLI: A REMEDY FOR MALINGERING

In a very interesting article on malingering published in the September, 1916, number of *The Military Surgeon*, Captain H. R. McKellar discusses a number of remedies employed for curing this all too frequent complaint of not overcourageous soldiers, and one of the most interesting among them is a prescription for a concoction not inaptly termed "mistura diaboli;" which must serve its purpose, since it is highly recommended by the Royal (British) Army Medical Corps. It was, in fact, found to fail in but a single instance. Here is the magic formula for exorcizing the makebelieve devil: Recipe:

Olei morrhuæ	30.000
Tincturæ asafetidæ	2.000
Tincturæ ferri perchloridi	0.650
Olei menthæ piperitæ	0.325
Aquæ, q. s. ad	60.000

Label: To be taken at one dose. Just before administering, sprinkle on top some quinine sulphate.

Captain McKellar's paper should be read by every physician, whether he is a military man or not, since all of us run across cases of malingering, and in many instances it is very difficult to arrive at an accurate diagnosis. He offers many excellent suggestions.

THE ATTITUDE OF THE PROFESSION TOWARD OSTEOPATHS AND CHIROPRACTORS

I do not feel that regular physicians should cultivate a feeling of antagonism toward osteopaths or chiropractors; for, these two schools to a certain extent are founded upon scientific truths, although they have been seized upon by shrewd men as a basis for money-making. However, there does not appear in either of them the least tendency to bestow upon humanity that philanthropic gratuitous helpfulness that constitutes one of the distinguishing features of regular medicine. They are moneymaking schemes, pure and simple.

However, there can not be the least doubt that in appropriate cases and conditions the services of either of these practitioners may prove of some value in assisting the natural tendency toward recovery from abnormality. Nevertheless, everyone who thinks reasonably can not help but recognize that, in order to

increase the financial returns of their activities, the practitioners of these two schools exaggerate the legitimate field, until they have covered conditions in which their manipulations are entirely inappropriate and sometimes even harmful.

Human nature favors economic adventure along the line of remedial measures for human ills, and history is replete with instances of shrewd men taking advantage of this fact and turning it successfully into moneymaking endeavor. Unfortunately, the regular medical profession is not altogether exempt from such deviations from the paths of integrity and honor.

The lure for victims must be baited with something nice, and the merchant who smirks and smiles and cordially shakes the hand of the man whom he does not like, in order to secure or hold his custom, or the politician who suddenly becomes affable, very affable, just before election are both examples of the fact that almost any selfish scheme can be worked upon a gullible public if one uses something nice for bait.

But, error of judgment in selecting help for human ills easily opens the door for fraud and humbuggery. Along the lines of remedial measures, any old scheme at any old time will reap a harvest of cash, and this strange result is assisted by nature to a remarkable extent. The affable osteopath who uses smiles and "hot air" the while he deftly manipulates the exposed body of his mentally sympathetic patron has adjuncts of great value to him in natural tendencies. Who can deny that woman, lovable and lovely, is thrilled into a state of ecstatic vigor by the gentle touch of a male hand upon portions of her body not ordinarily, or but rarely, thus subjected to physical contact. The sluggish crimson current of life is being made to feel the magic of that natural stimulant of the impulse which the Creator has so wisely implanted, and so hard to restrain, for insuring reproduction, and the clever Osteopath's rubbing and hypnotic influence diverts the credit from a generous God to himself—the rubber.

Thus it is that we find innocent woman, not conscious of the true impetus, heralding the Osteopath and pushing him up the ladder of fame, furnishing him with the best possible advertising at the least possible expense.

Still, such infatuation is not restricted to our wives and sisters, adored and adorable. The aging erotic male, enervated to the point of hysteria, can be seduced mentally into a slobbering conviction that his ills have been banished by "the rub" or "the adjustment," and, like the other sweet booster, get busy helping his supposed benefactor up the aforesaid ladder of fame. Still, I am not affirming that the Osteopath has done him no good. Results are the objectives that count, and, no matter what route you may travel, if you successfully reach the goal, you are proclaimed victor.

Let us shake hands honestly with the Osteopath and Chiropractor, and bid them God-speed if it is possible for them to accomplish such feats, in everything that tends toward making the world better and happier. On the other hand, be sure to let us endeavor to teach those with whom we come in contact professionally that confidence on their part in our sincere efforts to benefit them is essential for best results. If they truly think that the Osteopath or Chiropractor can be of greater assistance to them in combating physical ills, they should not delay to "cast their pearls before the swine" (not meaning to be taken too literally, of course), instead of grudgingly continuing with the far more reasonable scientific exertions.

The Chiropractor may be all right. God Almighty may have been very short-sighted when he constructed the foramina through which the spinal nerves pass from the cord to the mechanisms of existence, and some wise man (I have forgotten his name) discovered that frequent correcting adjustments—very frequent—are required to make good the divine omission and to restore conditions of health, and thuswise happiness. What possible fault can I find with such human wisdom?

Therefore, let me reaffirm and repeat: The regular profession should greet in a kindly manner the best efforts of our wouldbe brothers, but, at the same time it might be well to adopt a rule to the effect that, when a patron of ours has so lost confidence in our professional honesty and ability that he is constrained to bid us farewell and bestow his faith and patronage upon an Osteopath or Chiropractor, he must not hope ever to be accepted as our patient again, whatever befall.

A. D. Hard.

Marshall, Minn.

A SYMPOSIUM ON ECHINACEA

Just a word. I want every reader of Clinical Medicine to know that the February, March and April numbers of *Ellingwood's Therapeutist* will contain one of the

most complete symposia on echinacea ever presented in a medical journal.

Echinacea is a remarkable remedy. Those who use it believe that nothing else will do the work that it will do, and the number of those who use it is constantly increasing. We advise every reader of CLINICAL MEDICINE who can spare fifteen 2-cent stamps without impairing his resources, to send that sum to Dr. Finley Ellingwood, 32 North State Street, Chicago, for these three issues.

OX-BILE FOR CHILBLAINS

It seems rather a shame that one cannot address the publishers in more familiar words than just "Gentlemen," because each issue of CLINICAL MEDICINE seems to bring us closer—but—you ask for suggestions for the successful treatment of chilblains. Well, there may be many, I do not know. There is one treatment, though, that *is* successful, if used properly. This remedy does not consist of a raw onion under the pillow nor in wishing it on a corpse—what I refer to is, bile, bile from the cow.

Go to the butcher-shop and leave an order for three full gall-bladders. When procured, empty them into a suitable vessel and before retiring soak the feet in this ox-bile. When done, let the feet dry without wiping them. In the morning, remove the dried bile with warm water. This treatment sounds "out of the ordinary." So it is; but, if the sufferer desires relief, let him try it. It is a good plan to repeat this for three evenings, and then enjoy a season of comfort.

F. W. LORING.

Butte, Mont.

NITROHYDROCHLORIC ACID FOR CHILBLAINS

For the itching and burning of unbroken chilblains, bathe the parts with *dilute* nitrohydrochloric acid. I have never known it to fail to relieve.

E. H. KING.

Muscatine, Ia.

ZINC ACETATE FOR CHILBLAINS

Concerning the successful treatment for chilblains, you may recall that some time ago I wrote you that, of all the remedies I have tried for this trouble, the best is a saturated solution of zinc acetate, which I apply with a mucilage- or other brush or a swab of cotton. Preceding this, however, the parts should be soaked in hot water for about five minutes, then gently, but thoroughly dried. When dry, the zinc-solution leaves a white film. The application should be repeated in a few hours, when practicable. Two thorough applications of this zinc-acetate solution have given me the quickest, most pleasing, and satisfactory results of anything that I have ever used or heard of. I have employed this treatment in scores of cases and never think of using anything else. The zinc-acetate solution must be kept in a very closely corked bottle, as it will soon lose its virtue and strength, and, hence, should not be used after being kept for a relatively long time. For this reason, I make up only a 4-ounce bottle for the patient, no matter how badly the feet are swollen or how great the purplish discoloration, the pain, itching, and suffering. I have the patient pour out some of this liquid in a saucer and apply as told. I usually tell the patient to repeat the application in one hour if possible and thereafter every three or four hours or as often as the annoyance makes it desirable.

This treatment appears so simple, cheap and convenient, that, unless tried, one may be likely to doubt its efficiency; but, I have used this in many, many very severe cases, and without exception the patients (women, most often) have given unstinted praise, besides sending me their friends with the injunction, to "be sure and have the doctor give you the same kind of clear medicine as he gave me."

And now a question: What can you recommend for cold-sores of the nose and lip, and for cracked lip produced by a cold? I find these sores very much more difficult to deal with than I do chilblains. There is lots of demand from young ladies, and from young men with an upper lip in such a state that they can hardly shave. Is there anything that will do the trick, and at once?

I want to add that CLINICAL MEDICINE has been a great help to me; in fact, I should not want to be without it. I always read it from cover to cover, which includes the ads.

M. G. RIGNEY.

Parry Sound, Ontario, Canada.

[A treatment for chilblains and frost-bite, which is said to be very effective and to give great comfort to the patient, is the application, *hot*, of the melted paraffin-resin mixture suggested on page 299 for the treatment of burns. It is easily applied with an ordinary camels-hair brush. Try it, somebody, and report

results. I think the same treatment could work nicely with cold-sores.—Ed.]

A REMEDY FOR CHILBLAINS

In compliance with your recent appeal to your readers, I herewith submit my favorite formula for a remedy for chilblains:

Aromatic sulphuric acid	drs. 2
Quinine sulphate	grs. 30
Tincture of ferric chloride	drs. 2
Water, enough to make	ozs. 3

Apply two or three times a day, letting dry spontaneously. This prescription has proved effective in many of my cases.

R. B. Hopkins.

Milton, Del.

CHILBLAINS, AS TREATED IN LOS ANGELES

I would like to offer a suggestion to the inquiry which appeared in the February number of Clinical Medicine regarding treatment for chilblains.

I am the house physician for the largest department store here having about 1200 employees. You may smile when I say we have chilblains here; but I will say that, while our temperature does not descend as low as in some parts of the country, the cold at times "goes through you" and overcoats feel good. Office help and those handling cold metal, as well as those not very active, suffer from chilblains when our "cold" spells come.

I have tried everything some fellow doctor suggests, but have had best success with phenolated camphor U. S. P. Paint the fingers or toes at night or put on a wet dressing with phenolated camphor. Wear cotton gloves or stockings to bed. During the day paint the affected parts occasionally with the preparation mentioned.

Robert M. Dunsmoor.

Los Angeles, Cal.

THE LIGHT-BATH

The electric-light bath was introduced in this country some twenty years ago. Notwithstanding the imperfections of the primitive models and the lack of knowledge on the subject generally, no therapeutic agent has ever made a more gratifying record.

Since the early days of the light-bath, therapeutic fads by the score have arisen and been forgotten; but, the light-bath has grown in favor, until now it is claimed by medical leaders that soon it will come into wellnigh universal use in hospitals, sanitariums, as well as in private practice. In fact, the evolution of the light-bath in therapeutics is similar to that of the x-ray in the field of diagnosis, each playing a leading part in modern medical and surgical methods.

A careful study of the principles of this mode of treatment, which are based upon clinical reports of cases in which the light-bath cabinet designed by me was employed, proves this agency to possess many features of surpassing value for adaptation in all important fields of medical endeavor.

No other "bath" can be administered with such ease and convenience. The wide range of control obtained from the switch-plate and ventilating system permits of easy regulation of the bath for any particular effect desired in a given case.

If properly given, these baths are highly enjoyable. They are like fresh air and sunshine to jaded nerves, fatigued muscles, and poisoned blood; they ensure the rest, the recuperation, the tonic and exhilaration of the seaside sun-bath right at home or in the office or institution and under your personal care and supervision.

The light-bath is the most economical bath to instal and operate. With the modern wiring system, the current is easy to obtain, while a bath of five to twelve minutes' duration costs (at the average current-rates) only 1½ to 3 cents per treatment.

The public is now becoming acquainted with the benefits of the light-bath, especially people of the better classes who have enjoyed it at the large sanitariums, and they want to use it at their homes.

A light-bath cabinet occupies but little floor space, does not require the "sprays and douches" popularly considered necessary aids for getting best results, takes less time than the average office-treatment (only five to twelve minutes), and, unless the patient is feeble, calls for little attention on the part of the attendant. Leading practitioners are now giving these treatments in their offices, with most gratifying results, with simply a final dry towel rub. If, however, a physician cannot spare even the very limited floor space for the apparatus or wants the baths to be taken by patients confined to their homes, he can prescribe a "home cabinet" when the light-baths can be given at the patient's residence, under his personal supervision.

As a general tonic and reconstructant, the light-bath has no equal. For best results,

these tonic treatments should always be given in a well-ventilated new-type cabinet and should be continued only to the point of active sweating, followed quickly by proper cooling treatments, for revulsive effects. There is no danger of taking cold after the baths in the new-type ventilated cabinets, if properly managed.

Correctly utilized, light is the most vital physical promoter of the process of nutrition, powerfully stimulating both vegetable and animal cells alike. Practically the same physical results follow, under the influence of light-rays, in vegetable and animal organisms: the same vital force that aids the growing plant in the garden to build itself from air, water, and soil, that tints the cheeks of the ripening fruit in the orchard, also will redden the blood in the veins of the anemic, pallid invalid and aid in building up healthy bone and muscle-tissue from the foodstuffs he takes in. In other words, the same light-rays that prepare the solids in the soil for plant-food, that stimulate the tiny vegetable cells to growth and development, that transform the raw starch of the ripening fruit into grapesugar, these same radiations are capable of stimulating our digestive and assimilative functions to their fullest activity for normal tissue building and repair.

As a result of the influence of this powerfully acting radiant energy, there is increased elimination through the skin and all the other emunctories. The first effect of the light-bath is, to dilate the blood-vessels of the skin and muscles, producing active hyperemia; the next effect observed is, usually, a stimulation of the sweat-glands to produce activity. As the blood is thus diverted, from the liver, kidneys, bowels, and so on, to the surface and the extremities, the emunctory organs take up their work of elimination in a normal manner. Too great importance can scarcely be attached to such an enhanced process of elimination upon the general nutrition.

Most disease-conditions are associated with a disturbance of the circulation, of the normal distribution of the blood current, there being congestion in one part of the body and an undersupply, in another. To maintain the normal distribution of the blood supply between the skin and the muscles, on the one side, and the vital organs, on the other, is a consideration of first importance to every physician in the handling of his cases. The light-bath surpasses all other means to this end, by virtue of the persistent active hyperemia (flushing) of the skin which it produces. Frequent applications of the light-bath tend to establish a permanent balance of the circulation.

The light-bath relieves nerve irritation and hypertensions. The soothing, quieting effects of the light-bath are the results of: (1) the peculiar reflex inhibitory action of light-rays upon the nerve-centers; (2) the relief of congestion of nerve-centers, inflamed areas, and so on; (3) the elimination of toxic poisons that irritate the nerves and cloud the mind.

A careful study of the results of the "modern" light-bath, properly applied, assures us that in it we have one of nature's greatest gifts to mankind for the promotion of health and the curing of disease.

F. F. Burdick.

Milton, Wis.

CHARITY

By W. M. Gardner, M. D., Brooklyn, N. Y.

There was a wealthy Mrs. Brown,
Who had few friends and less renown.
Into the limelight she must get,
But, how, she had not thought as yet.
All day she thought and half the night
To find how she could change her plight.
And finally she made this vow:
"To charity I'll make my bow;
I'll help the poor and heal the ill;
For clinics shall I make my will."
She chose a house and altered it
So that it for her work was fit.
Then desks and chairs and drugs she bought—
Oh, lots of things. And then she thought
That Miss Butinski Busybee
Was just the one—yes, she could see
That Miss Butinski was the one
To add the touch and give the tone
That this great work ought to possess;
And that for this should get not less
Than several hundred dollars per.
Of course, the dear would much prefer
To be the manager for Brown
Than just a typist way down town,
For, here she'd do a work of love.
(Hush, don't say that the pay's above
The income of stenographer,
You might insult and anger her.)
Nurses and orderlies she sought
And comforts for the sick were brought.
When all was ready to begin
To offset carelessness and sin,
It came into the mind of Brown—
And this crept out into a frown—
That she'd not calculated right.
Once more she was in grievous plight.
The sum she planned to spend each year
Was pretty large, but things were dear,
And every cent was used up now.
So, Mrs. Brown was puzzled how
To carry out this enterprise;
For, she'd not yet a doctor wise.
"Oh, well," said she, "it matters not
Whether he's paid or whether not."
So, nurse nor manager she paid,
Nor orderlies nor any maid.

But for a doctor she obtained
A skilful man, a man well trained,
A worker hard, of good intent,
But who'd to scramble for his rent.
And, so, the clinic thrived and grew;
And everyone in town soon knew
Of Mrs. Brown, the wondrous dame
Who gave for love and hated fame.
And Miss Butinski Busybee
Was just as busy as could be,
For, it was ever up to her
To earn her several hundred per.
She thought of ways and means galore,
She made her records by the score,
And gleaned much data, talked much guff,
Mostly useless, worthless stuff.
And every day the doctor worked,
Kept all the rules, no duty shirked;
But, for his work he'll get his pay
When he appears on Judgment Day;
While Mrs. Brown, with face so grave,
Says to her Hippocratic slave,
"You're doing a grand work, my dear,"
And sheds a hypocrite's dry tear.
Brooklyn, N. J.

HUMANITY

By C. F. Whiteshield, M. D., Powers, Michigan

Mornin', doc! My little Nance
Don't feel 'tall well today,
Her cheeks is red, 'n she won't eat,
Don't ev'n care to play.
Yes, thanky, doc, 'n I'll be sure—
Teaspoon every hour, that's right.
Well, so long, doc, I gotta go,
We'll look for you tonight.

Good morning, doctah! I'm glad to find
You haven't started out.
I called to tell you of Lucile;
I'm really worried lots about
The way she looks the last few days,
And, so, I think that you
Had bettah call while on your rounds
And tell us what to do.

Hello, doc, do not make me laugh!
Say, ain't my face a sight?
Just jerk this cussed tooth right out—
Hain't slept for three hull nights.
Ouch! Easy, doc! Say, you're a peach;
By gosh, you got 'er quick,
But, say, it's awful hot in here,
Some water, I feel sick.

Please, doctor, Ma told me t' come
And arst 'bout sister Nell,
First she is hot and then she's cold,
Her breath has 'n awful smell.
She said you'd know just what to do.
I'll tell her what you said:
"Just take these powders, and you'll see
Sis 'fore you go to bed."

Whoa! Hello, mistair doctaire!
Vell, I bin glad me find
You home. Look on my slay.
Yes, sair, ve live on Camp three.
My friend she roll von the saw-log.
Canthook bin break, she fell,
She shure break his leg two, tree place.
We ask you make heem vell.

Me'a gotta da knife in da rib,
See, mista doc, I spitta de blood.
No lika say what make da fren
Swear da vendetta, maka da troub'.
May be da gold maka some fren hate.
May be da fight for diamond and pearl.
Betta my life mosta da men
Maka da fight over de girl.

And so it goes from day to day,
And oft the little stars
Will cheer the doctor on his way.
(He serves both Venus and Mars.)
It matters not the creed or faith
You follow, *his* must be
So broad and deep that 'twill embrace
All of humanity.
Powers, Mich.

JACK LONDON

By E. S. Goodhue, M. D., Honolulu, Hawaii

He loved our Islands as they lie
Among their mystic atmospheres.
With the same love we bear the spheres
Which shine familiar in the sky,
Whereon some day—we know not why—
We hope to spend long, happy years!

He loved Hawaii—deep and true,
A friend he was to every Isle—
Each lured him by its tropic guile.
Life to him here was bright and new,
And Fancy's shuttle swiftly flew
To weave for us his tales, the while!

Jack, dear, we'll see you soon.
You could not wait so long as we
To probe Death's tempting mystery!
So, from the Valley of the Moon,
At zenith in the glow of noon,
You passed to God's Eternity!
Honolulu, Hawaii.

THE TREATMENT OF BURNS

In first-degree burns, apply, in the form of dry powder, either bismuth subnitrate, alum or talcum. If, however, the pain is severe, first apply compresses moistened with a solution of aluminum subacetate of 2- to 5-percent strength; then, as soon as the pain is eased, the dry powder is applied.

In second-degree burns, apply compresses wet with the solution of aluminum subacetate, blisters first being opened. The compresses are to be held in place under oilsilk. When the shreds of epidermis forming the blister are easily detached, cut them off with scissors and thumb forceps. At this point expose the surface to the air for one hour. The surface is then dusted with the powder (as above) and covered with sterile gauze. If, in the healing, little points remain that ooze and granulate, touch them with 3-percent silver-

nitrate solution, then cover with petrolatum containing 2 percent of boric acid.

In third-degree burns, also apply compresses of aluminum subacetate solution; cutting away all shreds. When fever is high and if pus is on the burn-surface, keep it covered with applications of bichloride of mercury, 1 : 2000 solution. Expose the area to the air—air stimulates a granulating surface and dries up the serum. The granulations are touched every other day with silver nitrate, to prevent keloid formation. After exposure to the air for two or three hours, cover the area with 2-percent borated petrolatum. Where large areas are affected, it may be necessary to do a Reverdin graft.

Systematic treatment: morphine or strychnine, to meet, respectively, pain and shock.

LOUIS FRISCHMAN.

Yonkers, N. Y.

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[See the article on burns printed on page 298, with the editorial comment appended. The hot-wax treatment seems likely to come into very general use, and should be studied carefully.—ED.]

MORBUS MALIGNUS PROBOSCIUM MULIERUM: A CRY FOR HELP

Can you tell me what to procure to run a beauty-parlor—what furniture, instruments, medicines, fixtures, and so on? This town has about two thousand people, and I want to put myself in position to remove corns, bunions, callosities, etcetera, including warts from the probosces of old maids.

G. W. H.

——, Ill.

DOCTOR JELLIFFE JOINS THE N. Y. MEDICAL JOURNAL

The publishers of *The New York Medical Journal* announce that Dr. Smith Ely Jelliffe, of New York, has joined the editorial staff of that publication, taking the place of the late Dr. Claude Lamont Wheeler.

Doctor Jelliffe became associated with Dr. Frank P. Foster on the editorial staff of *The New York Medical Journal* when this publication took over *The Medical News*, of which he was editor, and he continued in this capacity for two years, when he severed his connections. While Doctor Jelliffe has devoted special attention to nervous and mental diseases and has built up a large consultation practice in this field, he has at no time lost touch with the general practice of medicine and brings to the work which he now is undertaking a wide knowledge of medicine as well as of men, a varied and valuable experience, sound judgment, and lofty ideals, qualities that will make him an important acquisition to the staff.

We congratulate *The New York Medical Journal* on the acquisition of so capable a successor to Doctor Wheeler and so efficient an associate to Doctor Sajous.

PRIORITY IN THE USE OF SODIUM CACODYLATE

Picking up CLINICAL MEDICINE for June, last, I find, on page 537, a statement by Dr. W. C. Greenwald, of Cleveland, Ohio, about sodium cacodylate. The following facts may be of interest to him and also to other readers.

I bought fifty dollars' worth of cacodylate (put up in ampules) in Paris, in 1900. I shared it with Dr. John B. Murphy, and during that year we both used the product for patients in Chicago. I have continued the use of the cacodylate ever since, and, from his writings and teachings, I know that Doctor Murphy also continued employing it until the time of his death. I do not claim anything myself, but I do believe that Doctor Murphy should, together with other Chicago physicians, receive credit for priority in the use of sodium cacodylate.

L. BLAKE BALDWIN.

Seattle, Wash.

APPLICATIONS FOR THE UTERINE CAVITY

In his article on nonoperative gynecology, published in the November number, which I have read with much interest, Dr. William Rittenhouse (p. 911) cautions physicians about the manner of wrapping the uterine applicator, lest the cotton tip slip off in the womb; and he also gives details regarding its proper length and the like. As for myself, I make sure that such undesired stripping of the applicator can not occur, my procedure being as follows: I carefully wrap the cotton about the end of the applicator so firmly that it is impossible for the instrument to pierce through the cotton at this point; also, I wrap the instrument not only down two inches from its end, but so far back that the cotton-wrapped portion does not altogether disappear in the uterus. If this is done and, yet, for any reason the cotton does strip off when the applicator is withdrawn, the plug can be pulled out by

grasping the cotton, which protrudes from the os uteri, twisting it a little more firmly with a forceps, and then withdrawing.

I was interested also in Doctor Rittenhouse's remarks regarding tincture of iodine and its application for sterility.

I can see no objection to the saturated solution of iodine in petrolatum, which he recommends, since any bland oil mixing with the iodine answers the purpose. I myself have had my best success in very many cases with 10-percent of the tincture of iodine dissolved in glycerin. I offer this suggestion to those who use tincture of iodine, inasmuch as this preparation is more or less of a cauterant as ordinarily employed; when mixed with the glycerin in the proportion of 1 : 10, it ceases to have any caustic action. Also, it will not stain and is easily washed from the skin, hence, can be used on any portion of the body.

R. Willman.

St. Joseph, Mo.

ELECTROCOLLOIDAL IODINE IN ENDOCERVICAL CATARRH

A most excellent and practical article appeared in Clinical Medicine for July last, entitled "Nonoperative Gynecology," by William Rittenhouse, of Chicago. For endocervical catarrh, he advocates the employment of tincture of iron, and his results are remarkably good. Following his instructions to the letter, gave me perfect satisfaction in every patient treated.

After following out his treatment, however, I applied electrocolloidal iodine of French manufacture, and I found that this medication procured quicker and more lasting results. Tampons moistened with this medicant are of marked value. The internal administration of iodine seems to be efficacious. I can add nothing to the methods so fully and plainly outlined by Rittenhouse. Iodine as an addendum to his treatment, both locally and internally, promotes and enhances recovery.

Frank Mackie Johnson.

Boston, Mass.

THE "RICH" DOCTOR

It is your province, and right, to tell us how to get rich, and your advice is based on good authority. First, you tell us readers that we are to be well grounded in our knowledge of the healing-art. Second, we are to be well equipped in everything that will add to our prestige—a neat office, good clothes, good traveling outfit, and everything that looks like prosperity. The last thing you mention in your editorial is, a microscope, and you say some very nice things about it. Well, Mr. Editor, you have seen enough of my writings to know that I am not always in harmony with your views. So, if I were to suggest anything to the young doctor about getting rich, I should say to him, Don't do it. And I will try to tell your readers why.

I am acquainted with the history of several rich doctors, some of whom were my colleagues. One of these I will describe in detail. This doctor was the child of poor parents and had to hustle for a meager education. He was graduated from a poorly equipped medical college, then located first out in the country where there was no competition, but near to a wealthy farmer who had an only daughter. The doctor's first effort to get rich was, to marry this semi-idiotic girl, by whom, in the course of time. he raised quite a number of other half-idiots, Soon after marrying, his father-in-law gave him a house and lot in town. He rode the best horses to be found and drove the best rigs, fitted his office up in becoming style, and built up a practice that brought him much money. His father-in-law helped him in his trading, and both grew richer and richer, until the town grew too small for them and, so, they removed to a neighboring city. There the father-in-law died, leaving the doctor heir to lands, which enhanced in value to such an extent that they alone would have made the man rich.

The doctor branched out in several lines, including the wholesale grocery business, and finally invested in a high-grade hospital. Money came fast, and the doctor took trips far and near, to Europe and elsewhere. However, in an evil day he fell into the hands of a *female*. This woman ruined his reputation as a Christian. Other females victimized him, and at last his health was shattered. He became a dope-fiend, and at last account possibly was on his deathbed. He and his wife separated. His half-witted children are left to quarrel and fight over his wealth, and the last state of this "rich" doctor is worse than the beginning of his career.

This is not an exceptional case. A doctor has no business with wealth. His duty is, to look after sick people, not riches. Please modify your advice and do not lay stress on getting rich—it will not do. Wealth, women, and whisky are a ruinous trio. Better to

leave them alone and stay with your profession and family.

W. P. Howle.

Charleston, Mo.

COOPERATION BETWEEN PHYSICIAN AND PATIENT

Accepting your invitation to readers to express their opinions on "health insurance," as suggested by you in Clinical Medicine for February, I will briefly tell of something new in this direction that, I am sure, will prove interesting to every reader of this journal who is in general practice. To the readers who are specializing or who confine themselves strictly to surgical work, this news will not appeal so strongly.

The reason why this "new thing," which is called The Physician-Patient Protective Association, strikes me as being much better than any state or federal law is, that it does not compel our patients to enter into health insurance, but puts it up to them as something in which they may participate, and that at only a nominal cost per month. Then, what interested me most of all is, that the plans of operation are such that there will be eliminated from the practice all the slow-pay, poor-pay, and other undesirable patients, providing we physicians will do a little hustling and see to it that our patients will become members of the association.

This latter part of the P. P. P. A.'s plan, which compels the physician to cooperate by hustling and writing up his patients, at first did not appeal to me, but, when eventually I made up my mind to take on this service, I turned loose and wrote up the 18 patients necessary to pay for one's own membership in the Association, and I succeeded in enrolling this number in less than a month. So, you see, it is an easy matter. I solicited 22 patients to take on this service, and the 4 who failed to join were, I will say, each one of them inclined to be what is called a deadbeat; they owed me all the way from $12.00 to $84.00, and I am quite certain that I shall never get any of that money.

Here is the plan upon which this protective service is furnished the physicians.

The P. P. P. A. literature tells the physician that it will cost him $20.00 to become a member and that he pays for his membership by remitting $2.00 cash and agreeing to cooperate in the service by getting, in the twelve months following, 18 of his patients to take on the service. Thereafter, on the 1st of January of each year he will have to pay the annual membership-fee of $2.00. The Association will permit the physician to keep the $1.00 membership of every patient whom he may get in after the original 18 have been signed up. This, in payment for his trouble.

For the $2.00 and the cooperation of securing the first 18 members, the P. P. P. A. pays the physician $2.00 for each house-visit and $1.00 for each office-call, and makes this payment inside of sixty days. This certainly is a protection!

The client-members of the P. P. P. A. have to pay an annual membership-fee of $1.00, payable the 1st of January after the first payment. In addition, they have to pay, each month, a medical fee of $1.15. Now, this is a good thing for the patients, for, it assures them of good medical services from their own family physician—and that prompt service, too, since the physician who has taken on this service knows that he is going to get his money inside of sixty days, instead of in a year or two, as he formerly got it from the same patients.

Any physician who may be interested in the services which this Association has to offer can get full information by writing to The Physician-Patient Protective Association, Kansas City, Missouri. I will say that this service is just what I want and that, if I had had it during the past thirty years of my practice, I should be at least $25,000.00 better off today. Some may say that this is not ethical; but, if you can show me where it is unethical for the struggling physician to use such honorable means as this service affords to get pay for his services, I'm willing to be shown.

Chas. A. S. Sims.

Kansas City, Mo.

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[This is not an advertisement—and we know nothing of the association, except that it is praised by Doctor Sims.—Ed.]

I have always been grateful when men jumped on my toes, because it forced me into a belligerent mood and before the melée was over we all got more or less right upon the points at issue.—Morris, "Doctors vs. Folks."

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When taking up the several forms of diabetes mellitus from a therapeutic standpoint, we are to begin with the question of what peripheral irritation or what focal infection may be driving the adrenals overtime.—R. T. Morris, *N. Y. M. J.*

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

DURING the past four years, I have repeatedly commented on the number of patients suffering from arthritis deformans that have been referred to me at Mudlavia after they had their tonsils removed, without any apparent resultant benefit. Since I have been medical director of Mudlavia, I have advised the removal of infected and diseased tonsils in my cases of arthritis deformans, following blindly—and perhaps thoughtlessly—the advice of Billings, Rosenow, and others; but, in the great majority of cases in which the tonsils were thus removed I found that the patients did not improve as expected and in many instances even were worse than before, so that of late I have hesitated to advise tonsillectomy and in a large number of my cases even have advised against it; for, I now am convinced that the operation is of no value for checking the further progress of the disease, that, indeed, it really has aggravated the condition in many patients.

An editorial in *The Journal of the American Medical Association* for March 17, entitled "Current Views Regarding the Tonsils and Their Surgical Removal," bears out my belief. This editorial comments upon an article by Doctor Crowe and his associates—which, by the way, I would advise every physician to read. In this paper, the authors say, "Tonsillectomy is rarely of benefit in the chronic deforming types of arthritis, in many cases probably doing more harm than good."

Funny, isn't it, how we doctors change our minds so often? And in this connection I venture to predict that before many years many of our ultra-scientific physicians will change their minds regarding the cause or causes of arthritis deformans. Just try to remember this dictum. Two years ago, in a paper read before the Medical Society of the Missouri Valley, I questioned the prevailing belief regarding the cause of arthritis deformans and said in part as follows:

"The pathological position of true rheumatoid arthritis, or arthritis deformans, is perhaps not well defined. It will be better seen when a comparison is made with other forms of arthritis, as for instance: (1) traumatic arthritis; (2) diathetic arthritis (gout); (3) neural arthritis, which is the sequel of a central or peripheral nerve lesion.

"It is now generally believed that arthritis deformans is of an infectious nature. But, the question is, what is the infective agent? Rosenow and others have thrown much light on the possible cause of this disease. Various germs have been found in the mouth, the tonsils, the gums, roots of teeth, and so on, which are believed by many physicians to be the direct cause of arthritis deformans. Tonsils are being removed as freely as were ovaries a few years ago. Teeth, sound and unsound, are jerked out with a recklessness that is appalling—but, up to date, arthritis deformans, like Tennyson's 'Brook,' 'goes on and on' just the same.

"It is probably true that a mouth or throat infection or a chronic focus of infection in any region may cause a systemic disease by hematogenous bacterial emboli, which infect the tissues and at the same time deprive them of nourishment.

But, I maintain that an injury, unhygienic surroundings, worry, autointoxication, overeating or undereating, prolonged lactation or too frequent child-bearing—anything that will impair the vitality of a person—may result in arthritis deformans or some other form of disease. Whenever a cell hesitates in its work, that moment pathogenic germs attack it.

"I doubt whether there is any physician in this country who sees more cases of arthritis deformans than I see at Mudlavia, and my observation has convinced me that as yet no one can be sure that any one germ or any one thing is the cause of this disease. Moreover, I am not at all convinced that arthritis deformans should be in the same class of infectious diseases as, for instance, acute articular rheumatism; if, indeed, it should be classed as an infectious disease at all. The disease may be a remote sequel of

an acute infectious disease, as nephritis or neuritis may follow acute rheumatism, scarlet-fever, or typhoid fever. I am thoroughly convinced that rheumatic phylacogen, used for acute infectious arthritis, has produced chronic arthritis clinically resembling arthritis deformans. Clinically, the disease strikes me more and more as a neurosis; yet, a pyorrhea, tonsillitis, urethritis or any other 'itis' may be the cause. I offer the suggestion that malnutrition or faulty chemistry of the body also may be the principal cause of the nutritive changes.

"Here are some clinical points to be remembered:

"The disease is much more prevalent in women; the proportion is from 5 to 10 women to 1 man affected—yet, women are much more careful of their teeth!

"The majority of cases of arthritis deformans arise at those periods at which the metabolism of the tissues is undergoing marked change, such as puberty and the climacteric.

"There seems to be a marked tendency in some families to this disease, or, rather, to be more exact, a tendency to inflammation of joints and fibrous structures.

"Acidemia and intestinal toxemia are frequent accompaniments of the disease, high urinary acidity and indicanuria. Full 95 percent of patients suffer also from neuritis and obstinate constipation.

"The joints that have been most actively engaged in the special work of the patient are usually the first to show signs of arthritic degeneration. Organs that are over-worked exhibit the first signs of decay.

"The hands often are affected first; very seldom do they escape altogether. Nearly always there is bilateral involvement. The first and second metacarpophalangeal joints are first affected. The high endowments of the hand imply a correspondingly high level of nervous organization. The complex motor and sensory apparatus of the upper limbs meets a physiological need; but, this very complexity may make it more vulnerable in disease. The force of the argument drawn from neural considerations is so weighty that there is no room for the curious surgical doctrine that the articular lesions in rheumatoid arthritis are the results of the mere contrition of opposing surfaces.

"Charcot said that the lesions tend to advance up the limbs toward the trunk. But, although the wrists are generally affected after the fingers and the ankles after the feet, it is seldom that the carpal and tarsal articulations are affected first. The elbow often escapes, while the shoulder is involved. In the lower limbs, the knees seldom escape; but, in this form of the disease in comparatively young people, the hip-joints are not often affected.

"The symmetry of rheumatoid arthritis has long been observed. Occasionally, however, there is a hemispheric distribution, not only of the arthritic phenomena, but of all the companion symptoms.

"At a later period of the disease, the articulations of the spine may become engaged. The cervical vertebræ are usually attacked first; a difficulty is felt in rotation and nutation; and often the discomfort is referred to muscles rather than to bones. The dorsal and lumbar-dorsal and lumbar vertebræ may be crippled next, so that nearly the whole length of the spine is transformed into a rigid column. The body is twisted and shortened and moves in one piece, and in the recumbent posture the muscular difficulties are great; in a number of cases, however, the disease does not go beyond the cervical spine or is checked by appropriate treatment. In this form of disease, the large preponderance of patients is among women.

"The partial or monarticular form of rheumatoid arthritis is seen in the knee, hip, spinal column, and shoulder. The joints which are nearest the trunk suffer the most; and by older writers the term 'hipache' was applied to all pains in that part, if the nature of the pain, whether due to sciatica or disease in the hip-joint, could not be nicely discriminated. But, it was recognized that men suffer much more from this form of arthritis than do women; and, as men are more exposed to injury and to the physical danger arising from occupation, so this form of rheumatoid arthritis came to wear a surgical aspect. A very slight injury may give the first impulse to senile change. But, what a relative word senility is! Observe that the socalled monarticular lesion tends to spread and to become multiple, rheumatoid hips are likely to be followed by rheumatoid knees, and the infirmity in the elbow may follow infirmity in the shoulder. Very rarely are the hips crippled without engagement of the neighboring lumbar and even of the lower dorsal vertebræ. But, a polyarticular lesion may become grafted upon the other, when the patient is "young in years" though "old in hours." An active person between 70 and 80 years of age exhibits now and then a rheumatoid hand or foot, having appeared as a sequel of arthritic trouble in shoulder or

hip; either of which may have been monarticular for some time previously.

"Atrophy of the muscle is often an early symptom and synchronous with the arthritic disease. Sometimes the atrophy is distinctly in advance and is out of all proportion to any mischief in the nearest joints. Along with this, the skin often is glossy and pink or is translucently pale and shines like a mirror. The fingers and hands often afford examples of glossy pinkness and those parts of the limbs that are ordinarily covered with clothing may be waxy white. The skin on the flexure side of the fingers becomes thin and brittle. The nutrition of the nails occasionally suffers. When one recalls all these symptoms, that the disease is commonly symmetrical in its progress, that it is often associated with neuralgic and trophoneurotic symptoms and the muscular wasting is out of proportion to the joint mischief, can one be blamed for seeing an analogy between arthritis deformans and the arthropathy originating in disease of the spinal cord? Still, they all may be due to bugs in the tonsils! We are willing to admit that tabes is primarily due to the spirocheta pallida, and, so, why may not the disease under discussion be due, possibly, to a streptococcus or to the amœba buccalis? We can lay anything to germs, and who can deny it?"

I have often thought of writing a book on the exploded theories advanced by the medical profession during the past twenty years. It would be interesting and somewhat iconoclastic. Such an exposition might do the regular profession some harm, but, also, incidentally, do the people some good, inasmuch as it would show the laymen that, after all, we members of the regular medical profession are not the court of last resort, that there are some things that we don't know, while many things that we thought were true we are discovering to be untrue. Take, for instance, this: We have been taught for quite a while that brown, coarse bread is better for us than the white, and now a good authority comes out with a statement that this is all wrong, that bread made from fine white flour is much better. There has been written a tremendous lot of tommyrot on the food question. Men, such as Kellogg and McFadden, tell us to eat only nuts and vegetables, others tell us to eat largely of meat. The market is swamped with books bearing such titles as "What to Eat," "Eat and Grow Thin," "Eat and Grow Fat," *ad nauseam.*

Many sins have been committed in giving advice on the nutrition of the people, as, for instance, in starting with the statistical conception that a normal workingman's ration might be determined and thence proceeding to the assumption that any diet below this must mean undernutrition and starvation-diet; when, as a matter of fact, there is no "normal" ration for anyone, either with regard to the amount or the kind of food, nor is the term "workingman" of uniform significance.

One who has his eyes open will frequently see things that tables and general statistics do not reveal. Whenever I read an article in a medical journal giving a lot of statistics as proof of the author's contention, I am seized with an unmistakable pain. Recently I was looking up some literature on occupational diseases and found some erudite statistician had discovered (?) that 6.8 percent of bakers suffer from cardiac disease, while among printers only 3 percent have cardiac disease. It would be interesting to know which class suffer the more from gonorrhea, ingrowing toenail or pip.

I think, had I taken the pains to get up a bunch of statistics on the few thousand cases of arthritis deformans that I have had under observation, that I could have shown that 62.3 percent of these sufferers had piles, 48.6 percent of the men afflicted with the disease were baldheaded, and that 97.2 percent of the women sufferers had corns and bunions, and that probably 50 percent of both sexes ate sauerkraut at an average of once a week; and thus I might materially have added to the literature of "causes" of deforming arthritis.

My opinion concerning the actual value of statistics is about on a par with that of my brother-in-law, Judge Silas Porter, of the supreme court of Kansas. I herewith quote a small portion of an address—"A Popular Misconception"—delivered by Judge Porter before the Saturday Night Club of Topeka, Kansas. His remarks on statistics, I think, are too good to go unpublished. He said:

"Some years ago, my attention was called to the remarkable similarity in the gastronomic tastes of criminals condemned to suffer the death-penalty; and, in order to satisfy my curiosity, I made a diligent effort to discover the facts and, if possible, the cause. For years thereafter, I never 'passed up' an opportunity to read the newspaper accounts of the last hours of condemned persons. In doing this, I had a single purpose in view. The description of the last interview with the family of the condemned, the manner in which he received the con-

solations of his spiritual adviser, the hours he passed in troubled or peaceful slumber while the death-watch hovered over him, his demeanor as he walked to the scaffold, what he said when the black cap was about to be drawn and limbs bound, his declaration of religious faith and hopes of salvation, his protestations of innocence, his confession and advice to young men; not one of these, nor the gruesome details of his contortions and wigglings as he swung into eternity, made upon me the slightest impression. I read the accounts intent upon discovering the menu of the last meal the executed man ate, the choice of victuals that he made, as, according to immemorial usage, the person condemned to be put to death is granted the privilege of selecting what he will have to eat at his last meal.

"I had observed that in very many instances where the condemned was an ordinary, common murderer, the choice was the same—ham and eggs, coffee, ice-cream, and tobacco in some form. To be exact, the figures compiled from information gained by correspondence with prison-officials throughout the United States showed that, out of 1127 who suffered the death-penalty during a period of one hundred and forty-six years, 1039 called for ham and eggs; a few, presumably colored gentlemen, asked for catfish. Coffee and tobacco in some form were included in almost every one of these meals ordered. Only 36 of the whole lot ordered a boiled dinner. I have always felt morally certain that every one of these 36 was an innocent man. Possibly my belief in this respect may have been influenced to some extent by the knowledge that under similar circumstances I should have made the same selection.

"During these investigations, I succeeded in interesting a number of professors of sociology and criminology in the subject, men who had devoted a great deal of thought and investigation to similar inquiries, and I carried on for several years a large correspondence with them, exchanging views, facts, and figures. For a time, I had fond hopes of being able to give to the world a table of statistics that might have been of vast benefit to persons seeking information along these lines. But, I was obliged to abandon the enterprise, for the reason that I found the preparation of the tables of statistics an interminable and an intolerable nuisance. One professor, for instance, wrote that in his opinion the statistics would be of little value, unless I were able to show what proportion of the criminals choosing ham and eggs had committed murder through avarice and what proportion had been actuated by other motives. Another thought that there should be a separate column stating what percentage of those choosing particular dishes had murdered old people as compared with those whose victims were children. He was equally positive that I should indicate the number of cases in which the crime was committed in the daytime as compared with those that were committed at night; that some consideration should be given to the question of whether the criminal was a chronic or a first offender, and also whether his parents were illiterate or otherwise. Others of my correspondents offered similar or yet other suggestions.

"If all these suggestions had been followed, the plan would have figured out something like this: A certain percentage of male criminals convicted of murdering young children in the nighttime, actuated solely by motives of revenge, are shown to have chosen for their last meal ham and eggs with ice-cream, coffee, and tobacco. Again, where the condemned man was shown to be able to read and write and the victim was an elderly person and the motive was mercenary, as I now recall, 32.5 percent would have appeared to have ordered ham and eggs and coffee, without ice-cream; and something like 27 percent of the same class, where the conditions were further modified by the fact that the criminals were born of illiterate and cross-eyed parents in the dark of the moon, added tobacco to their list. I have never taken to mathematics; and statistics, while often quite entertaining to me at the beginning of a discussion, very soon become tedious, stale, and unprofitable. An array of figures disheartens me; I like them not. That two and two makes four, I will concede, not so much because I have demonstrated it, but because others who are adept at figures have so assured me time and time again.

"I have never been able to understand how the several amounts of the checks I draw each month always come so dangerously near wiping out my balance at the banker's. Once a month for many years, I have gone over the figures, confident that some careless bank-clerk has committed an egregious blunder, which, once detected, would call for an apology from my friend the banker, an apology which I have always held myself in readiness to grant without the slightest trace of hesitation. But, my labors have been in vain.

[*To be continued.*]

Among the Books

HAMILTON: "RECOLLECTIONS"

Recollections of an alienist, Personal and Professional. By Allan McLane Hamilton, M. D., LL. D. With original illustrations, photographs, and facsimiles. New York: The George H. Doran Company. 1916. Price, $3.50.

There are books that are read easily, without effort, and even, without much thought, somewhat as one watches moving pictures, merely to change the trend of one's mental processes, to take one's mind off the serious problems of his calling. The story may be told easily and fluently, it may be attractive; but, there is hardly a remark or an observation that causes us to pause and to meditate or even to read it over. Such books are excellent in their way—for recreation when we are tired.

There are other books that cannot be read, but must be studied. Their contents are mastered only by close attention, by deliberate and persistent mental effort. These books are technical, as a rule, they are such as we need for enabling us to keep up and move with the times, to progress with advancing medical science, to do the best possible for our patients.

There is a third class of books, and the reading of these commands our interest and produces keen enjoymant. We neither skim over them nor watch the rapidly passing show, nor do we study them laboriously; but, we read attentively and reread, pausing often, as we may pause before some painting in a picture gallery, and we linger over certain passages, thinking them over, enjoying their spirit, their message and the form in which it is put, and we give no thought as to how soon the book may be read through, because we do not care to hurry through it, enjoying every part in itself and finding ever new sources of pleasure.

Among the third category of books, the Reviewer classes the volume under consideration, the perusal of which affords a pleasing contrast to the somewhat forbidding title. It is true, the book is full of "recollections of an alienist," but these experiences are so varied, so diversified, they enter so astonishingly into every phase and topic of as full a life as an educated man possibly can lead, of one who enjoys the liking, the respect and the friendship of a great many men in various pursuits in life, and, withal, the story is told so directly, so truly and so attractively that it is difficult to tear oneself away from it.

Doctor Hamilton is one of the most noted alienists of the day. In his professional experiences of rather more than half a century, he has seen and experienced an unusual number of things that are of more than personal interest and for the telling of which he deserves great thanks. But, he does not start with the relation of his professional experiences, interesting though they are; he carries us through an intimate bit of history of the Civil War; on a journey through the straits of Magellan, on which he accompanied Professor Agassiz; he depicts the early life of the far West, the days before San Francisco became civilized; he makes us acquainted with the world's foremost artists and thinkers, whom he has met and known intimately; he confides to us his hobbies, his love for collecting objects of art and the manner in which he could satisfy it.

In addition to all these personal experiences, in the recital of which we meet so many of the world's best men, Doctor Hamilton relates in detail the histories of many *causes célèbres*, among them the trials of Guiteau, the murderer of President Garfield, that of Czolgosz (Tcholgosh), the assassin of McKinley, and many other murder trials in which he himself participated as an expert witness. Doctor Hamilton also gives an interesting account of a visit to Mrs. Mary Baker Eddy, who fares rather better at his hands than she did at those of Frederick W. Peabody, Esq., in his "Religiomedical Masquerade."

The diversity and multitude of Doctor Hamilton's personal experiences, covering over half a century of an active professional life, are, by no means, the only attractive feature in this book, which gains by the intimate and personal style of diction, by the kindly, yet, keen humor with which the author is endowed, and by his large and wide knowledge of men and things; all of which bear witness that the author has lived a full

and complete life, such as it is given to few men.

Doctor Hamilton's book is not one to be read hurriedly, neither is it one to be studied like a textbook; it is to be kept handy to your favorite reading-chair and to be picked up when you are settled comfortably in dressing-gown and slippers, with your pipe, the reading-light just right and the telephone disconnected so that you cannot be interrupted. Let the good wife sit at the other side of the table, engaged with some indifferent occupation, so that you may read passages to her and thus increase your own enjoyment by having her share it. There will be enough to last through the winter, and "then some".

WARD: "GROCER'S ENCYCLOPEDIA"

The Grocer's Encyclopedia. A Compendium of useful information concerning foods of all kind; how they are raised, prepared, and marketed; how to care for them in the store and home; how best to use and enjoy them; also other valuable information for grocers and general storekeepers. Compiled by Artemas Ward, formerly editor of *The National Grocer*. Price $10.00.

This encyclopedia is, indeed, a most interesting volume, one that presents in easily available form much information not ordinarily to be found in any other work, besides such as still more frequently would necessitate a search through numerous books and magazines. The subjects, of course, are arranged alphabetically, and the text is generously illustrated by 449 engravings and 80 colored plates, the beauty of some of the pictures of luscious fruits almost making one's mouth water.

The information presented in this volume is enormous. There actually is not a single article of food looked up by the Reviewer that has not been described, while for many the description is detailed and records numerous facts of interest. Thus, for instance, 12 pages of text are taken up by the description of 48 different kinds of cheese, 20 pages are devoted to coffee, including a page color plate showing 12 varieties of leading beans depicted so naturally that they might be mistaken for real specimens. The discussion on oysters occupies 7 pages, with copious illustrations; that on mushrooms takes up 6 pages, including illustrations of 14 varieties.

Regarding other lines, we find in this voluminous cyclopedia a discussion of mineral waters obtained from 39 different springs, their locations, and their specific qualities. Further, there are paragraphs on cold storage, adulteration, cookery, preservation, how to prevent mold and maggots, and such subjects as fermentation and distillation.

Finally, a dictionary of names of foods, containing all names current in the English, French, German, Italian, and Swedish languages; a list of culinary and bill-of-fare terms that are of interest in the reading or preparation of menus. Altogether, this beautifully printed and magnificently illustrated work is a reference-book of greatest value, not alone to the grocer, for whom it was primarily designed, but equally so for every dietician, pharmacist, and even physician.

EDGAR: "OBSTETRICS"

The Practice of Obstetrics: Designed for the Use of Students and Practitioners of Medicine. By Clifton Edgar, M. D. Fifth, revised (twenty-second thousand), edition. With 1316 illustrations, including 5 colored plates and 34 figures printed in colors. Philadelphia: P. Blakiston's Son & Co. 1916. Price $6.00.

The fifth edition of Edgar's beautiful textbook on the practice of obstetrics is a worthy successor to the preceding ones, and it is enriched by new articles on painless labor under twilight sleep, on the use of pituitary extract in uterine inertia, and on the artificial feeding of infants.

The author is emphatic about his insisting upon the inclusion of the entire pregnant period in the domain of obstetrics, claiming, that women at this time should be constantly under the observation of a competent physician; as he says, no one who has had an extensive obstetric experience can fail to observe that a large number of pregnancies, when carefully studied, really are pathological in their nature. Accordingly, Doctor Edgar, in his exposition, devotes considerable attention to the hygiene and management of pregnancy and, particularly, to the important subject of pathological pregnancies, with special attention to the toxemia of pregnancy.

Concerning the use of pituitary extract in uterine inertia, the author agrees with the prevailing opinion that this remedy should be employed only in cases where the resistance to be overcome is not so great as to endanger the health either of mother or child. His plan, in instances in which he has a reason to fear a too great resistance, is, to give small tentative doses of the drug, repeating if neces-

sary; his object being, not a prompt, so-called "brilliant," termination of the birth by tempestuous uterine contractions, with its implied danger to the fetus as well as to the soft parts of the birth-canal, but, rather, to bring the presenting part of the child within easy range of a simple forceps operation.

One paragraph is devoted to the prevention of conception, and Doctor Edgar concludes that for this there is one course possible that may be recommended as both safe and efficacious and which hardly can be abused. This method consists in the obliteration, for a short extent, of the fallopian tubes by the vaginal route. This course, the author declares to be unobjectionable in theory from any standpoint; for all that, he fears that it hardly constitutes a solution of the problem.

Concerning the author's treatment of the many obstetrical problems in detail, his book is really too well and favorably known to require further praise. It has been a favorite and faithful guide to many practitioners since its first appearance, and will continue to be so.

SKEEL: "GYNECOLOGY"

A Manual of Gynecology and Pelvic Surgery for Students and Practitioners. By Roland E. Skeel, M. S., M. D. With 289 illustrations. Philadelphia: P. Blakiston's Son & Co. 1916. Price $3.00.

A characteristic of this little manual is its personal note, in so far as the discussions of gynecological diseases and their most suitable treatment quite evidently are dictated by the results of the author's personal investigations and experience, although he does not hesitate to defer to the opinions of other authors, a list of references bearing directly upon the subject discussed in a given chapter being appended to it.

The treatment of the subject-matter is in accordance with the author's definition of gynecology as this discipline at present is found in practice; namely: "a highly specialized branch of general surgery bearing a close relationship to obstetrics and demanding a thorough knowledge of general medicine for a proper appreciation of its relative importance in the medical field, with its multiplicity of specialties."

The volume is small and handy, the printing is good, and the illustrations are clear. This book often will be consulted in preference to larger and bulkier treatises, because of its great convenience by virtue of its handy size.

MAC LEVY: "TOBACCO-HABIT EASILY CONQUERED"

Tobacco-Habit Easily Conquered: How to Do It Agreeably and Without Drugs. With an Appendix: "Tobacco, the Destroyer". By M. Mac Levy. New York: The Albro Society, Inc. 1916. Price, $1.25.

The author of this book is well known to physicians through the excellent work that he is doing on his Health Farm in New Jersey and in his city gymnasium perched on the roof of a real skyscraper, in New York City, where he is teaching many people how to come back to a reasonable, wholesome, and healthful life; how to overcome the vicious consequences of the present-day breathless and nerve-killing dollar chasing; and how to get the best out of life in a normal manner. Mr. Mac Levy's teachings are characterized, above all, by their common sense. He does not appear to have much use for drugs, although realizing that these "crutches" may be necessary under certain conditions—but, that is for the doctor to say. He is convinced that many conditions of ill health are amenable to his own particular methods, namely, exercise, simple food, sound sleep, a suitable commingling of play with work, in short, a simple wholesome life.

An adherence to these rules of living, Mr. Mac Levy insists, will enable anybody who desires to break himself of tobacco-addiction; and he discusses them under twenty different headings or "dictums," which constitute "the law and the prophets" of right living.

One may not agree with Mr. Mac Levy in everything he says, but, there can be no doubt about his sincerity and his earnestness of purpose, nor can it be gainsaid that a persistent obedience to his rules of living will enable anyone to overcome any abnormal habit whatever, provided the desire to do so is sufficiently strong to become a determination. Mr. Mac Levy's book shows courage and is replete with good advice and cheerfulness (he must be a splendid chap to live with, even if somewhat strenuous), and it will pay every physician to study it carefully, no matter whether he smokes or not, or whether he wants to swear off or not. The Reviewer doesn't care to give up smoking, at least not just now; nevertheless, he has greatly enjoyed reading this book and Mr. MacLevy's

preachments and has benefited from them; also, he intends to continue to study it.

"ENDOCRINOLOGY"

Endocrinology: The bulletin of the Association for the Study of the Internal Secretions. Published quarterly by the Association for the study of the Internal Secretions, Henry R. Harrower, M. D., secretary, Glendale, California. $5.00 a year; single copies $1.50.

The first number of this new journal is a handsome and handy pamphlet of 128 pages of text, and it is introduced by remarks on the study of the internal secretions, by Dr. Llewellys F. Barker, of Johns Hopkins University, which are followed by editorials on the future of the internal secretions, as viewed by Doctor Sajous; endocrinological problems, by Tom A. Williams, and the prospects of anterior pituitary therapy, by Henry R. Harrower. There are original contributions on various related subjects, and almost 80 pages of the number are devoted to abstracts from literature on internal secretions.

While it has taken many years before the study of the internal secretions received its merited attention and consideration in this country, since Doctor Sajous' large work on this subject first appeared in 1903, the disappointments and difficulties of this early period are being balanced by the widespread interest that now is aroused by the subject. Doctor Harrower's enthusiasm and the connections which he formed in the preparation of his interesting volume on hormone-therapy make him an effective moving spirit for the undertaking, and it is to be hoped that the Association for the Study of the Internal Secretions will flourish and be the means of securing ever more light on this dark and difficult subject. We extend to the new journal our best wishes.

HOWARD: "BREATHE AND BE WELL"

Breathe and Be Well. By William Lee Howard, M. D. New York: Edward J. Clode. 1916. Price $1.00.

"Civilized man does not know the how or why of breathing so as to get the best out of himself. . . . a trained breathing apparatus will enable men or women to add to the length of life and keep life's activity up to good and profitable working-conditions". In elaborating upon this postulate, Doctor Howard makes a point that has come to the realization of physicians for some time; for, it is relatively frequent at the present day that patients are told by their attending physicians that they do not know how to breathe.

The question is, What constitutes good breathing, and Doctor Howard describes graphically what he considers good breathing and why it is good. He lays particular stress upon the importance of outbreathing, which is as great as is that of vigorous inbreathing. He also stresses the necessity of employing the full force of the diaphragm as a potent and indispensable aid to correct breathing.

More, far from being satisfied with advising the complete and habitual use of the lungs as the natural breathing-apparatus, the author shows convincingly what we also have known in an academic way, but hardly realize sufficiently, that "breathing through the skin" also is essential to good health.

Doctor Howard's book on breathing is decidedly worth while. It would lead us too far to discuss the very few points in which we differ with him; nor are they essential. The main fact is, that the author's advice is sensible and practical; that it can be put into practice by everybody without cost, without sacrifice, and that the following of this advice will be conducive to better health.

This book is an excellent tonic for physicians who are notoriously careless in obeying the demands of hygiene. It is also a good guide for many patients and should be prescribed to them, not only for reading and study, but for practical application.

WRIGHT: "MUSCLE TRAINING"

Muscle Training in the Treatment of Infantile Paralysis. By Wilhelmine C. Wright. Second edition. Boston: Ernest Gregory. 1916. Price 25 cents.

This pamphlet constitutes a concise and authoritative treatise designed to aid physicians and parents in restoring to victims of poliomyelitis a useful amount of the use of their muscles. The author is a graduate of the Boston Medical School of Gymnastics, of the Chirurgic-orthopedic Clinic of Dr. A. Hoffa at Berlin, and now is assistant to Robert W. Lovett, M. D.; the latter a leading orthopedic surgeon of Boston, who has had an exceptional experience with poliomyelitis cases. The methods here described have been devised and proved as the result of ten years' experience as chief assistant to Doctor Lovett. Every exercise is carefully detailed.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 6278.—"Auto-toxemia." W. S. B., Vermont, referring to query No. 6278, writes as follows: "Anemia accounts for low hemoglobin, yellow skin, heart trouble and stomach trouble; also for shortness of breath. In regard to the jaundice (yellow skin) and inability to keep warm at times, I would suggest that blood smears be taken at times when the patient feels chilly and that these be subjected to a prolonged Wright's stain, in fact, overstained, then looking for malarial parasites. It would interest me to learn the results."

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ANSWER TO QUERY 6286.—"Reduction of Enlarged Tonsils." Several years ago, I was repeatedly on the point of removing the tonsils of my own girl. One day I found in *Ellingwood's Therapeutist* an article (author's name forgotten) advising the combination of baryta iod. 3× and calcarea carb. 3×; three tablets of each to be taken three times a day. I used the remedies and soon saw the tonsils dwindle, and now the formerly frequent attacks of tonsillitis fail to return. Later experience with other patients has been similarly favorable. But, the medicine should be persisted in for at least six months. This treatment is so simple and promises so much that it deserves extended use.

A. F. BURKARD.

Santa Barbara, Calif.

Queries

QUERY 6296.—"Neurasthenia." E. B. D., Ohio, forwards, for examination, a specimen of urine and blood from a maiden lady about sixty years old who, he writes, "has been sick for about two years with what most doctors would call neurasthenia. She has melancholia to the last degree, but her appetite is good and she sleeps well most of the time. She is very weak and frail. The amount of urine voided in twenty-four hours is about 4 pints. Her pulse is a little rapid, hard, and bounding most of the time; sometimes a little wiry. Her mental condition is such that she will not admit that she is somewhat better in any way or at any time, but, rather, is constantly getting worse and never will get well. The muscles of the back of the neck are drawn so hard as to keep her head bent back most of the time, and this, she says, is her greatest suffering. Her mental condition is one of absolute despair, almost bordering on frenzy. It is difficult to determine whether there is some underlying cause for her mental condition or whether it is sheer contrariness, or is assumed for the purpose of getting sympathy."

The blood examination does not prove particularly informative, the proportion of red to white cells being nearly normal, namely, one white cell to 550 of the red; moreover, the normocytes predominate. No parasites or evidence of systemic toxemia are present. The urine, however, reveals intestinal fermentation and renal congestion. You certainly have a difficult condition to contend with and, perhaps, the wisest procedure would be to place the patient in a sanitarium. You do not mention the condition of the reflexes, pelvic organs, area of hepatic dulness, and so on. What is the prior history? Is there pronounced sclerosis? Have the eyes been tested by a competent oculist?

Tentatively, we would suggest the following treatment: The valerates of quinine, iron and zinc with sumbul; the active principles of myrica cerifera, gr. 1-6; of juglans, gr. 1-6; and boldine, gr. 1-32; before meals. Dilute

phosphoric acid, 10 minims well diluted, with meals. A brisk mercurial purge every third night, followed by a laxative saline the next morning. An epsom-salt sponge-bath, two or three times a week on retiring, may be ordered. Only highly nutritious easily assimilated food in moderate quantity and at regular intervals should be permitted. Massage or vibration of the muscles of neck and the application of the faradic or sinusoidal current along the spine and extremities may prove of benefit.

In addition, positive suggestion possibly may help some. Impress upon the woman that the testing of her urine and blood has enabled you to gain a clear idea of the condition you have to contend with, then outline your treatment and assert positively that, it will surely benefit her, although slowly. You might state that in a day or two she will find the contraction of the neck less distressing, that the extremities will be warm, and that she will experience a sense of general wellbeing, and make other appropriate suggestions. As a matter of fact, these very things then probably will occur, and, if once you can overcome the mental depression, you may succeed, if not in curing, at least in materially benefiting the unfortunate woman.

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Query 6297.—"Hyoscine-addiction." A. L. S., Nebraska, has under observation a woman who since receiving the hyoscine treatment for morphinism craves (and uses) the drug employed to cure her. He believes that such secondary addictions are not as infrequent as generally is supposed.

Although hyoscine-addiction is not often encountered, it does occur and not a few hyoscine-morphine addicts have required treatment during the past few years. Under certain conditions, really enormous doses of the combined drugs can be tolerated, inasmuch as they counteract each other to a very great extent. Unless taking unduly large doses of the mydriatic, the patient often secures a more pleasing effect from the combination than from either the hyoscine or the morphine alone.

The woman who took the hyoscine-treatment for morphine (evidently ineffectively) probably experienced certain pleasant hallucinations while under the effect of the drug, and, since the morphine alone fails to produce that newer effect, she now craves hyoscine in its place.

There is only one course to pursue in the case of hyoscine-addicts, and that is, to deprive them of the drug as rapidly as possible. This writer has found that individuals taking hyoscine *alone* can be easily broken of the habit, especially if thorough elimination is secured and small doses of an alcoholic stimulant are administered for a few days. Some observers have claimed that alcohol is the antidote *par excellence* for hyoscine-poisoning.

Of course, when morphine is being taken in conjunction with the hyoscine, it will be more difficult to cure the patient. Under such circumstances, we should be inclined to reduce the morphine gradually to the vanishing point (following the general lines laid down in the literature) and then begin to reduce the hyoscine. Alcohol should *never* be given to a morphine-habitué.

Do not forget that the greatest period of danger to the individual is that immediately after the withdrawal of the last modicum of the habit-drug and that the relapses mostly are the consequence of premature cessation of the supportive treatment.

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Query 6298.—"Facial Paralysis." D. E. B., Kentucky, writes concerning a young man of twenty, hearty and seemingly perfectly well in every respect, except for his being slightly nervous. However, whenever he smiles or laughs, the lips on the left side separate wider than on the right side. There is no impediment of speech.

Unfortunately, it is impossible, without a thorough study of the individual, to venture an opinion as to the cause of this condition. It is possible, of course, that it is simply a so-called habit-spasm; on the other hand, there may be some involvement of the facial nerve.

We can only suggest that you look up the chapter on general neurological diagnosis in "Diseases of the Nervous System," of "Modern Clinical Medicine," and then go over your patient carefully, and try to ascertain whether there is any weakness of the lower branches of the facial nerve supplying the mouth. You must carefully examine the branch supplying the forehead.

Inability to retract the angle of the mouth, owing to facial paralysis, often appears more distinctly in certain conjoined movements than in merely opening the mouth; for instance, when the patient makes firm pressure with the hand or shows the tongue, and so on. The angle of the mouth and both sides of the face should be observed closely during speech and laughing. The laughing must, of course, be spontaneous. If the patient is told to laugh, the movement is, in most cases, voluntary and a mere imitation of the emo-

tional movement. Care must be taken to exclude asymmetry of the mouth, which often is congenital or may be caused by defective teeth. This condition, of course, cannot be ascribed to disturbance of innervation.

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QUERY 6299.—"Pellagra a Silicon-Intoxication?" Y. O. J., Missouri, is anxious to learn definitely whether pellagra is a silicon-intoxication. In an editorial printed in our March issue, the various theories as to the etiology of this disease were discussed at some length. As is there pointed out, the belief that pellagra is an infectious disease and, therefore, transmissible, has received a measure of support through the investigations of the Thompson-McFadden Pellagra Commission, that cannot be ignored. But, as against that view, there still stands the theory of a purely dietetic origin, seemingly conclusively demonstrated by Goldberger's experiments. Then, again, there is the theory in which you are interested, namely, that pellagra is caused, principally, through the agency of drinking-water containing soluble (colloidal) silicates; it being set forth that the disease is prevalent in regions in which the water used for drinking purposes passes through certain geologic strata from which it derives the offending chemical.

You will be interested in Perdue's "Pellagra," Part I of which contains Alessandrini and Scala's studies on the etiology and pathogenesis of pellagra, while Part II contains the author's own survey of the facts about pellagra as observed in the United States.

On page 175 of this book, reviewing extensive experiments, Perdue writes: "Without doubt, silica has a noxious action on the animal organism, in whatever way and in whatever state it is introduced. Also, the results of this noxious action are not due to the silica alone, as a material, but rather to the state which it assumes in the water, either as a true solution or as a colloidal suspension."

You can readily understand that it would be impossible, in the scope of this communication, to consider the subject at greater length, and we strongly advise that you procure Perdue's book and carefully study it.

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QUERY 6300.—"Diabetes Insipidus After Brain Trauma?" P. C. P., Oregon, sends a specimen of urine from a young man nineteen years old, who, about two months ago, sustained several fractures of the skull. Since then, he has been passing large quantities of light-colored urine, the bladder is irritable, there is some itching of the genitals. He complains of great thirst and also of general weakness.

The 24-hour amount of urine is 5046 mils (Cc.): it is alkaline; its specific gravity is 1008; the total amount of urea eliminated is 20.18 Grams; neither albumin, sugar, nor acetone is present; there is no evidence of tissue changes in the kidneys, but there are very many large-sized crystals of triple phosphates, also many colon-bacilli.

This polyuria, associated with polydipsia and making its appearance after an injury of the skull, suggests a disturbance of the nervous equilibrium in consequence of the trauma. The itching of the genitals suggests diabetes mellitus, although the urine analysis is negative as to sugar and the specific gravity is too low for a saccharine urine. Forchheimer ("Therapeusis of Internal Diseases", vol. 2, p. 774) says that in rare instances diabetes insipidus is met with in cases of organic nervous diseases and of traumatic injuries to the skull. He adds that as a rule these cases are types of primary polyuria, perhaps through some disturbance of a center in the medulla, but that few have been properly studied by modern methods.

That was written in 1913. During the same year, Professor M. Simmond, of the pathologic institute of St. George's Hospital at Hamburg, traced a direct connection between polyuria and diabetes insipidus and the diseased pituitary body (see CLINICAL MEDICINE, 1914, p. 110). The British investigator Edward A. Schaefer demonstrated, by his animal experiments, that the pars-intermedia of the pituitary body, (that is, the narrow middle section of this organ) elaborates a substance acting upon the renal cells and tubules as a diuretic; and, indeed, Professor Simmond asserts that a connection between increased urinary secretions and lesions of the pituitary body could be established clinically. In a case referred to by Professor Simmond, in which a man had been shot in the head and soon afterward was affected with polyuria, the radiograph showed the projectile to be resting close to sella turcica.

In Krehl's "Principles of Clinical Pathology" (translated by Beifeld), reference is made to anatomical lesions of the cerebellum, the pons or the medulla having, at necropsy, been found diseased in cases of diabetes insipidus. It is also shown that clinical and experimental data point strongly to the etiological importance of the pituitary body

in diabetes insipidus, although it is believed that here disturbances in the function of the posterior lobe may stand in relation. The editor of the book named refers to Lewis and Matthews who were able to produce by operative procedures a transient polyuria in dogs in one-half of their experiments. From the fact that the most constant finding in those animals exhibiting polyuria, was a remnant of the epithelial covering of the posterior lobe, the pars intermedia, they have concluded that diabetes insipidus results from a hypersecretion of the diuretic substance of the posterior pituitary lobe, this substance being the product of the epithelial cells of the pars intermedia.

Similar conclusions are quoted by Harrower ("Practical Hormone Therapy"), to the effect that diabetes insipidus may stand in relation to an excessive function of the pituitary body.

From a consideration of all the facts here cited, it is reasonable to conclude that our correspondent is dealing with a case of polyuria, possibly diabetes insipidus, consequent upon the injury sustained by the central nervous system and in which very probably the function of the pituitary body was disturbed in some manner.

According to the experiences of Francesco, of Venice, as quoted by Harrower, diabetes insipidus was controlled in two instances by injections of pituitrin, and it might be worth while to try that in this case, with a view to influencing the polyuria of this young man in the same manner.

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Query 6301.—"Refractory Menorrhagia." W. C. K., Ohio, seeks help in the case of a young woman, aged 18, in perfect health until her 12th year, when she had measles. One month later, menstrual bleeding started, this continuing almost constantly with but little intermission, but at no time so severe as to call for medical help. Two years ago, when she first consulted the Doctor, she was markedly anemic, owing to the menorrhagia, which was growing severe. From that time until the present, the Doctor succeeded on only one occasion in arresting the flow for three weeks. He used calcium cacodylate, horse-serum, and tampons. Emetine, together with Buckley's uterine tonic, checks it for a few days.

The patient, we are told, is normal in all other respects; examination of womb has failed to reveal anything abnormal. The girl never kept company. Her family history is good. Her sister is normal in her menstrual habits. The Doctor concludes that this is a case of hemophilia and that it was brought on by the measles.

It is possible that in this case the menorrhagia is, as the Doctor puts it, "due to an abnormal condition of the blood," as just such conditions may occur in purpura, anemia, malaria, syphilis, incipient phthisis, chlorosis, general debility, and so on. As a rule, of course, anemia and chlorosis cause amenorrhea, but not infrequently we find them associated with menorrhagia. Again, menorrhagia may be owing to affections causing obstruction to the return of venous blood. It is not uncommon for just such a flow to be associated with cardiac disease, especially mitral insufficiency.

Also, it must not be forgotten that menorrhagia may be dependent upon psychic conditions; in which case, the reflexes incident to puberty may have a definite bearing. In brief, abnormal uterine hemorrhage is a symptom, and not a disease.

In order to institute intelligent treatment, we must recognize the cause. Excessive loss of blood during the establishment of the menstrual function has a significance far different from that later in life. The former may not be pathologic, while in the latter instance it always is so.

The blood should be examined repeatedly and the condition of the body-chemistry carefully ascertained by means of urine analysis. This is essential for a proper understanding of the case. Furthermore, it is necessary to know whether the hemorrhage is due to systemic or local abnormalities. For instance, ergot is of service in many forms of active and passive congestion, but practically no results have followed its administration when the cause of the bleeding is extrauterine or when pathologic conditions are limited to the endometrium.

Some such combination as hydrastinine, viburnum, and hamamelis is almost invariably indicated in metrorrhagia due to reflex conditions incident to puberty or where the cause is some underlying or chronic disease. Viburnum, especially, gives results in excessive menstruation occurring during the course of or subsequent to acute infections. In anemia, hemophilia, and allied diseases, iron should always be given. The chloride and the carbonate of calcium are of service only in certain circumstances.

Hypodermic doses of pituitary solution or of emetine hydrochloride probably will be effective in this case. We should wish particularly to make use of the hemostatic properties of emetine hydrochloride.

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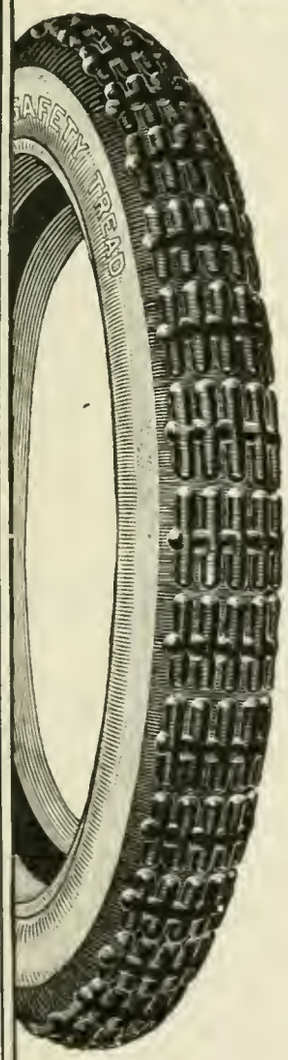

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News Notes Department

It would be trite to say that the constantly increasing and expanding use of electricity constitutes the principal miracle of our time. We are so accustomed to find the most incredible stunts made possible by means of electricity that we have become blasé and accept a good deal as a matter of course which really is wonderful. More recently the production of heat by means of electricity has been adapted to various purposes of rapid sterilization by means of combining radiated heat with superheated steam. The apparatus is being produced under the "Pentz System" by The Santiseptic Manufacturing Co., Corn Exchange Bank Bldg., St. George, Staten Island, New York. Truly, Doctor, the sterilizing apparatus put out by this company for the use of physicians (Model D) is a little wonder, and so is many another one of the various appliances produced by this company. We suggest that you write to The Santiseptic Manufacturing Company asking for literature, especially for their interesting pamphlet on instantaneous sterilization.

In the treatment of coryza, rhinitis, and other affections of the nasal passages, topical applications of antiseptic and soothing remedies are of preeminent value, particularly if these are made up with a vehicle which is not washed out readily by the copious nasal secretions. For this reason, preparations with a vaseline base are preferable to the thinner oils, the only difficulty being the mechanical one of applying the ointment satisfactorily. Collapsible tubes have been in use for some time with elongated nozzles for insertion into the nostrils, but these contrivances are not free from objection.

The Schoonmaker Laboratories, Inc., 70 E. 42nd St., New York, the manufacturers of an excellent line of V-E-M preparations (vaseline, eucalyptol and menthol) have put on the market a little apparatus that is attached to the collapsible tube containing the ointment and causes its distribution over the nasal mucous membrane by compression. This little apparatus strikes us as being very ingenious; at the same time it is inexpensive, the price for a tube of ointment together with the applicator being only 50 cents.

An article about the "rise and fall" and the restoration of creosote would make interesting reading and, indeed, it has been attempted by various writers, notably by Bernheim. In spite of all disadvantages and drawbacks attendant upon the internal administration of creosote, it has remained a popular remedy with most practitioners by reason of undoubted beneficial results that may be obtained from its persistent use in indicated cases. It is all the more a cause for congratulation that recent experiments have eventuated in the production of a preparation of creosote, either alone or in combination with the hypophosphates, which is free from irritating properties, and by means of which the beneficial therapeutic action of this valuable remedy may be expected with confidence. In "Creosote Delson" and "Creofos Del-

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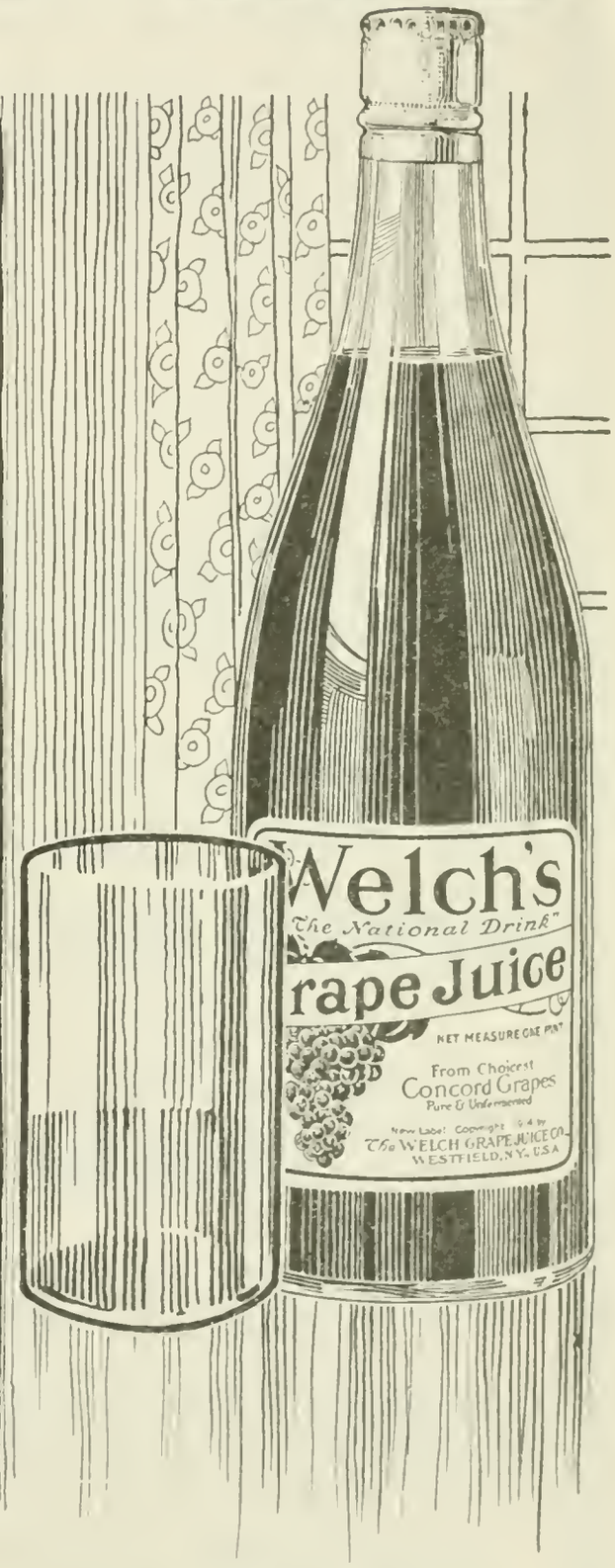
We will be glad to send our booklet, "The Food Value of the Grape." Send 25c for sample pint bottle, express prepaid.



The Welch Grape Juice Company, Westfield, N.Y.

son," The Delson Chemical Co., Inc., 13 East 16th Street, New York City, has contributed a new form of an old remedy that bids fair to establish creosote more firmly than ever in the favorable consideration of physicians.

The P. T. Probst Company of Rochester, N. Y., evidently believes in intensive and extensive advertising and regard it as a paying investment, as it undoubtedly is. In order to induce physicians to let themselves be convinced of the excellence of their products, they have put up a "Preparedness Outfit" made up of a large variety of remedies, that are in constant use by physicians, in sufficient amounts to demonstrate the purity and quality of the preparations. Wishing to offer a special inducement for the outlay involved in ordering this outfit ($30.00, payable on easy terms), a beautiful emergency bag is offered free, made of cowhide, and retailing at $12.80. The P. T. Probst Co., certainly have faith in their products, and cause to count upon come-back orders; for, otherwise, such an expensive advertising proposition could not pay.

One might think, the principle that the price of marketed objects is regulated by the demand for them, and, particularly, by the rate of their production—increased production bringing about lower prices to the user or consumer—would be such a logical proposition as to constitute a rule without exception; and, yet, we have been familiar for many years with the somewhat remarkable fact that standard typewriters have sold at the same price of $100.00, in spite of the immensely increased popularity of these useful machines, and in spite of their far greater and constantly increasing distribution from year to year. It is true, that

Hydroleine

Made from pure cod-liver oil emulsified after a scientific formula by approved processes.

The need of many children for cod-liver oil has been met with marked success by Hydroleine. They take it willingly; they—as well as adults—like its distinctive nutty flavor. Hydroleine is also exceptionally digestible. While its scope of usefulness is widened by its palatability and digestibility, it is always notably dependable.

Sold by druggists.
THE CHARLES N. CRITTENTON CO.
115 Fulton St., New York
Sample will be sent to physicians on request.

The Path that Leads to the Grave Begins in the Lower Bowel!

Stasis of bowel contents, favors blood pollution, which in turn poisons body cells.

LIQUID ALBOLENE

McK&R

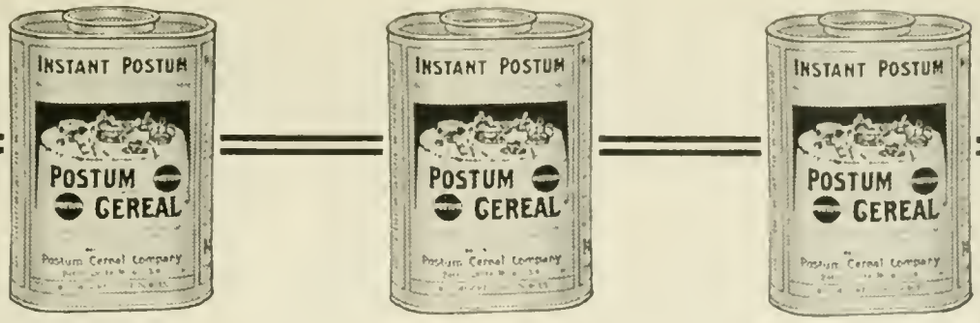
refined from GENUINE RUSSIAN OIL

penetrates and softens dried and hardened fecal matter, lubricates the intestinal tract, and so aids the bowel to regain normal function. Liquid Albolene overcomes intestinal stasis by mechanical not medicinal action.

PROPERLY PRESCRIBED IT PROVES PARAMOUNT

Literature Samples

McKESSON & ROBBINS INCORPORATED ESTABLISHED 1833 NEW YORK



THREE THINGS

go to make up the basis of success (during more than twenty years of cumulative experience) of that wholesome, harmless and nourishing table beverage known under the convenient and distinguishing trade-name—

Instant Postum

1—When properly prepared (according to directions on the tin) and taken hot with good cream, it is a most agreeable drink.

2—Made of clean, hard wheat and a small percent of pure molasses, it contains no coffee and hence is free from the harmfulness of coffee, which contains the habit-forming alkaloid—caffein.

3—Postum fills the universal demand for a hot beverage and makes the change from coffee and its attendant ills an easy matter. It is thus a therapeutic adjuvant when the physician is called on to interdict coffee.

The ***Clinical Record,*** for Physician's bedside use, together with samples of **Instant Postum, Grape-Nuts** and **New Post Toasties** for personal and clinical examination, will be sent on request to any Physician who has not yet received them.

Postum Cereal Company, Battle Creek, Mich.

certain smaller writing machines have been put on the market at reduced prices and that some makers of standard typewriters have produced "Juniors" selling at about one-half the price of their ordinary machines.

In the United States, more than in any other country, the use of the typewriter has become so popular that it is being accepted even for unofficial and for social correspondence, and it looks as though the familiar expression "no family should be without one" might become true for the typewriter. The Oliver Typewriter Company has undertaken the task of increasing the popularity of writing machines and has decided to eliminate the heretofore heavy expense of distribution and to create even greater use for the typewriter, lowering the price and putting it within the reach of every one. There is no doubt that this policy of The Oliver Typewriter Company is based on sound reasoning and that it is quite feasible to sell standard makes like the "Oliver" at a price which can be paid by people of moderate means. We commend the undertaking of The Oliver Typewriter Company, the more so as the Oliver Typewriter is one of the very best available.

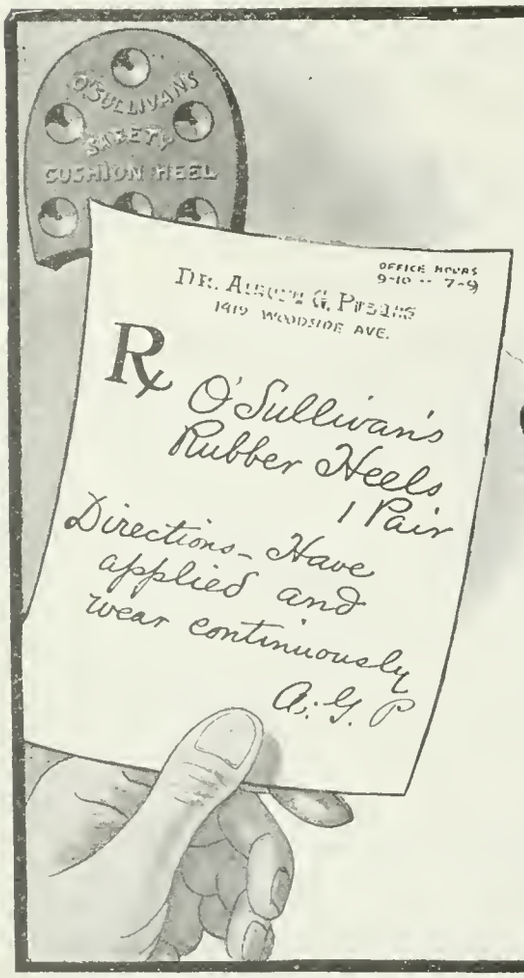
The great world war has interfered seriously with the work of many manufacturing chemists in the United States, particularly during the last year, when at most only small quantities of many imported chemicals could be obtained.

During the period of rising prices and consequent scarcity, the Intravenous Products Company of Denver, Colorado, has been conducting a series of experiments, and, at about the time the supply of a certain arsenical was cut off, produced this article in sufficient quantities for the needs of its own laboratories. Later, production was increased, many of the more important manufacturing chemists in the United States now being supplied with this preparation in wholesale quantities.

The Intravenous Products Company has produced a number of valuable preparations for intravenous administration which are put up in an unobjectionable manner. They publish a very interesting catalogue, and their literature, which is yours for the asking, Doctor, will prove of service to you.

The idea of positive therapeutics by means of definite constituents of drug plants which are constant in their constitution was introduced to the American medical profession by Doctors Waugh and Abbott, who have deposited the results of their protracted and detailed studies and of their immense clinical experience in two monumental volumes that contain a vast amount of useful information on this subject with which the authors have been identified for so many years. Published originally at $5.00 per volume, both these books are offered in new edition at this price, that is $5.00 for two. THE AMERICAN JOURNAL OF CLINICAL MEDICINE which makes this offer through its book department has taken this means of complying with the wish of the authors that the study of positive therapeutics might be made as easy to the general practitioner as possible.

In the treatment of anemia, iron has always been a favorite remedy, and has maintained its position in spite of various difficulties attendent upon its therapeutic administration. Nevertheless, it was a step forward when some years ago Professor Gude showed that manganese may be employed in all conditions in which iron has been found of service and that it is a reliable and effective tonic of particular service



In Meeting The Hygienic Needs of Every Active Person

the use of rubber heels is indispensable, and the physician who prescribes

O'Sullivan's HEELS

has the satisfaction of knowing that these assure the highest quality, resiliency and wearing capacity. As a result, his patients obtain maximum benefits in the all important details of the prevention of spinal jar and irritation, the diminution of fatigue and the avoidance of "wear and tear" of the nervous system.

In brief, in prescribing rubber heels, as in ordering everything else, the use of the best, *safeguards the results.*

O'SULLIVAN RUBBER CO., New York

KORA-KONIA

Satisfies both PATIENT and PHYSICIAN

Kora-Konia brings comfort to Baby—peace of mind to Mother and satisfaction to Physician. Its soothing, healing influence, antacid, haemostatic and mildly astringent qualities, together with its dependable uniformity, make it an indispensable aid in the treatment of moist or discharging surfaces, chafing, skin abrasions, burns, scalds, chicken-pox, prickly-heat, sore and raw nipples, rash, rawness or redness of skin, cuts and scratches.

Kora-Konia as an efficient, chemically correct dusting powder, with absorbent, non-irritating qualities also has many obstetrical uses which will readily suggest themselves to you.

Supplied by your Druggist 25 cents
Test-it-yourself-package Free by writing to

THE HOUSE OF MENNEN NEWARK, N. J.

in wasting diseases, in diseases associated with "poor blood" and in convalescence. Pepto-Mangan (Gude) the preparation which he elaborated and which is supplied to the American medical profession by M. J. Breitenbach Company, New York, has occupied a high position as a reliable tonic for many years and, undoubtedly, will continue to hold it.

The depleting method of treatment which one school of physicians defended and practiced about one hundred years ago, had much in its favor in so far as it made use of proper means of securing complete elimination of retained toxic material. If this method had been only the stepping stone or an introduction for corrective and building-up measures, better results would undoubtedly have been obtained. Under present conditions of civilization, it is almost unavoidable that the body requires a periodical cleaning out, and many remedies there are for the purpose, some simple, some complicated. Sal Hepatica is an effervescing saline combination with laxative and eliminant action, prepared by the Bristol-Meyers Co., of New York, which is offered as a dependable evacuant.

Spring has always been a trying period of the year for small children and for old people. The great variations in temperature, the severe and often times cold and damp winds, the frequent changes between sunshine and cloudy and rainy weather make the early spring irksome to individuals whose resistance is not very strong. Anything that will add to their bodily strength and vigor is of advantage by increasing the resistance to colds, particularly to bronchial irritations and disease. For this purpose Cord. Extract Ol. Morrhuae Comp. (Hagee) has been found of great value not alone for its therapeutic influence but also by reasons of the fact that it does not upset the stomach. Give it to your patients who suffer annually from bronchial attacks.

In spite of many articles that have been written against preparations of acetanilid with more or less justice, it cannot be contradicted that properly used this drug is a very valuable one for many conditions associated with pain, and here as in other problems it is a question of legitimate use against abuse. It is only the abuse that is to be condemned, while legitimate employment of remedies with positive action is always permissible. For this reason, acetanilid preparations, like, for instance, Phenalgin, made by the Etna Chemical Co., 59 Bank St., New York, are of service many times when the necessity arises of relieving transitory pain and when the administration of an opiate would be objectionable for good and sufficient reasons. At any rate. we have found this combination of acetanilid with sodium bicarbonate and ammonium carbonate of service in a variety of conditions. Of course, this and similar remedies should not be given indiscriminately, and should not be entrusted to the patient for self-medication but their use should be controlled by the physician.

Mechanical supporters in the form of abdominal binders, trusses, bandages, etc., must comply with several conditions if they are to be of service at all. They must be elastic in order to admit a reasonable amount of expansion and at the same time secure a sufficient degree of support. They must be constructed correctly so that they may be kept in place and not move up or down. They must have a reasonable degree of tensile and textile strength and'

THREE DRESSINGS DE LUXE
CAMPHO-PHENIQUE LIQUID
CAMPHO-PHENIQUE POWDER
CAMPHO-PHENIQUE OINTMENT
CAMPHO-PHÉNIQUE -OINTMENT- (Scrofonol) PRICE $1.00 MANUFACTURED BY CAMPHO-PHÉNIQUE CO ST. LOUIS, U.S.A.
CAMPHO-PHENIQUE GERMICIDE ANTISEPTIC FOR INTERNAL EXTERNAL AND HYPODERMIC CAMPHO PHENIQUE COMPANY
POWDER CAMPHO-PHENIQUE POWDER GERMICIDE ANTISEPTIC FOR DRY DRESSING CAMPHO PHENIQUE ST LOUIS, MO. U.S.A. JAMES F. BALLARD, PROP
Campho-Phenique Liquid-- The best Emergency Burn Dressing.
Campho-Phenique Powder-- Antiseptic Healing Powder in all Surgical Work.
Campho-Phenique Ointment-- Eczema, Scrofula, Ulcers, All Skin Diseases.
Samples and Literature on request to Physicians Dentists Nurses Hospitals
CAMPHO-PHENIQUE CO. ST. LOUIS, MO.
CAMPHO-PHENIQUE

Stanolind

Trade Mark Reg. U. S. Pat. Off.

Liquid Paraffin

(Medium Heavy)

Tasteless — Odorless — Colorless

In Treating Hemorrhoids

STANOLIND Liquid Paraffin, used regularly, very generally relieves hemorrhoids and fissure, even when of some years' standing.

Since these morbid conditions are usually the result of constipation, and are aggravated by straining, Stanolind Liquid Paraffin aids by rendering the intestinal contents less adhesive, by allaying irritation and thus by permitting the diseased tissues to become healed.

Where a contraindication for operative treatment exists, the use of Stanolind Liquid Paraffin in these conditions will frequently give relief from distressing symptoms and may even permit the parts to be restored to a condition where operative procedure may be postponed.

The ***special advantage*** of Stanolind Liquid Paraffin lies in the fact that its beneficial effects are not diminished by continual use, as is the case with almost any other laxative.

Stanolind Liquid Paraffin acts by lubrication and by adding bulk to the indigestible intestinal residue.

A trial quantity with informative booklet will be sent on request.

Standard Oil Company

72 West Adams Street (*Indiana*) Chicago, U.S.A.

75a

finally, their price must not be unattainable. The products of the Empire Manufacturing Co., at Lockport, N. Y., have made their reputation with the medical profession by reason of the fact that they comply with the demands made upon supporters, trusses, bandages in everyday use. These appliances are constructed properly, they are made honestly and are sold at fair prices.

The modern method of treating infectious diseases with the aid of biologic remedies exerting a direct antitoxic action or stimulating the sick organism to produce its own antibacterial substances has received approval and support of practicing physicians in the degree in which the latter familiarized themselves with the theory and practice of immunology; but no less in accordance with the quality and efficiency of biologic products that are offered for their clinical use. The research department of The Abbott Laboratories has produced a not inconsiderable number of bacterins and of other biologic remedies that clinicians have found to be carefully and correctly combined and which have made good their claim to the approval of physicians, by practical experience. Moreover, The Abbott Laboratories are the agents for several serums and antitoxins prepared by The Slee Laboratories of Swiftwater, Pennsylvania, offering potent aid in cases in which the urgency of symptoms renders the rapid effect of passive immunization necessary. A useful booklet on these biologic products and how to use them is awaiting your call, Doctor. All you have to do is to drop a postal to The Abbott Laboratories expressing your wishes.

The use of rubber gloves in surgical and obstetrical practice has come to be a necessity for perfect aseptic technic. Much is demanded of such gloves and, unfortunately, not all gloves that are offered on the market meet the condition that must be imposed upon them. The Miller Rubber Co., Akron, Ohio, produces an excellent rubber glove, sufficiently thin not to impair the sense of the touch and yet tough enough and sufficiently elastic to stand the strain and permit the necessary freedom of movement.

In advising young men who wish to take up the study of medicine about the colleges where they may obtain a medical education, various viewpoints have to be considered. It is not always possible for ambitious young men to study in the aristocrats among medical colleges, for the simple reason that the necessary funds are not available, and that a great deal of outside work must be done in order to earn the means for study. There are some schools in which self-help and independence on the part of the student is encouraged and fostered and where the faculty extend all possible assistance to young people who have enough spunk to face the difficulties and hardships of five years of uninterrupted, continuous and heartbreaking grind without a let-up. For, it is hard work to go creditably through a medical school, earning one's way. Bennett Medical College in Chicago, the School of Medicine of Loyola University, is one of those schools where the grit and enthusiasm, the persistence and earnestness of purpose, that are absolutely necessary for such a course, are appreciated and where every possible help is given to further and advance young people. "Bennett" offers a 5-year course in modern scientific medicine leading to the M. D. degree, and a 6-year course leading to the B. Sc., M. D. degree. The college owns large and well equipped laboratories and possesses teaching facilities in 15

Anasarcin
TRADE MARK
TABLETS

A dependable remedy in

Cardio-Vascular Diseases

Clinical results have proven to thousands of physicians that Anasarcin is of unsurpassed remedial value in the treatment of disorders of the circulatory system and of ascitic conditions. It controls heart action, relieves dyspnoea and eliminates effused serum.

Anasarcin's Distinctive Features

Dependability of the cardiac stimulant and diuretic properties of its ingredients made certain by standardization.
Prevention of toxic cumulative effect.
Distinct, definite dosage.
Absence of ill effects after prolonged administration.
Constructive influence upon circulatory and nutritive processes.
Restoration of balance between arterial and venous systems.

That you may observe the action of Anasarcin and subject it to an exacting clinical test we will supply a sufficient quantity for that purpose without expense. To physicians only.

THE ANASARCIN CHEMICAL COMPANY
WINCHESTER, TENNESSEE
Messrs. Thomas Christy & Co., London Agents

Case No. III.

The nutrient value of Virol illustrated in a series of cases—particulars of which have been supplied by Medical Men.

Age 14 months. Weight 10 lbs. Before Virol.

Age 24 months. Weight 30 lbs. After Virol.

Doctor's Report:

H. J., a boy of 12 months, was brought to me. When I saw him he was much wasted. The usual stereotyped remedies were tried one after the other without avail. He only weighed 10 lbs. I then put him upon the VIROLIZED Dietary Ladder, with immediate and gratifying success. His weight uniformly increased at the rate of six ounces per week until on May 6th following he weighed 22¼ lbs. He is now a fine healthy child in the pink of condition and weighs 30 lbs.

Virol is a Preparation of Marrow Fat, Glycerinated Extract of Red Bone Marrow, Malt Extract, Eggs, Lemon Syrup (made from fresh lemons), &c. It is free from chemical preservatives, and the materials are treated in a manner that does not alter their nature.

Virol is a valuable nutrient in Malnutrition, Marasmus, Anæmia, Rickets, and Consumption. The delicate nature of the preparation and the ease with which it is assimilated gives it a special value in Gastric Dyspepsia and Gastric Ulcer.

VIROL

Sole Agents: The Etna Chemical Company, 59 Bank Street, New York

In Glass and Stone Jars: $0·40, $0·75, $1·25.

metropolitan hospitals and dispensaries. Deserving young men and women should write to 1359 West Fulton St., Chicago.

I am told that people who are unfortunate enough to have to wear false teeth have a whole lot of trouble keeping their teeth firmly fixed; the plates sometimes will wiggle and even will irritate the gums and cause them to become sore. The Corega Chemical Company of Cleveland, Ohio, is putting up an antiseptic adhesive powder which, it is claimed, will form an elastic cushion between the tissues of the mouth and the dental plate, holding the latter firmly in place, even when there is little or no natural suction. This should be a source of great comfort to many people whose lives are made miserable by their artificial grinders.

At the present time, there are few physicians in general practice who are not called upon at one time or another to cooperate, more or less, in the construction or at least in the management of a hospital. Certain it is that every physician should take pains to study the requirements of hospital construction and of hospital management, if only in order to cooperate to greater advantage with the authorities of the hospital in which he places his patients requiring special care. The Max Wocher & Son Co., Cincinnati, Ohio, offers a publication entilted "How To Equip A Hospital", which is mailed free on request to physicians or nurses interested in the subject. This publication contains many valuable suggestions and much serviceable informtion.

Many cases of anasarca, of anemia and of ascites, due to cardiovascular disease, have been benefited by the administration of Anasarcin tablets which contain remedies controlling the heart action, relieving dyspnea and aiding in the elimination of effusion. Anasarcin is said to contain the active principles of oxydendron arboreum, sambucus canadensis and urginea scilla and, although empirical, has proved of great value in many desperate cases.

Defective Elimination is acknowledged to be one of the most frequent sources of ill health and very often causes functional disturbances that may eventuate in serious organic disease. As an effective remedy to counteract the harmful effects of insufficient elimination, Cystogen-Aperient is offered as performing a double service by stimulating to normal function and by disinfecting the intestinal and urinary tracts. Cystogen-Aperient is a granulated effervescent salt, and is said to be indicated in the treatment of gouty conditions and auto-intoxication, in diseases such as pellagra, typhoid, etc.

In the treatment of tuberculosis, iodine often is useful for the purpose of stimulating the bronchial secretions, of liquefying them if thick, viscid and difficult of expectoration. It also tends to relieve congestion of the bronchial mucosa and thereby much distress. Burnham's Soluble Iodine, made by the Burnham Soluble Iodine Co., Auburndale, Mass., is offered as a reliable iodine preparation by which the physiological effect of the drug may be secured readily, promptly and without injurious by-effects. It certainly is a convenient preparation and one that does not irritate the digestive organs as much as does the potassium salt, for instance.

It has been shown that the thyroid gland normally contains a certain amount of iodine which is

"It's a condition that confronts us, not a theory"

When you are called to a case of DYSMENORRHEA, it is a condition that demands something more than theory.

Your demand results from the remedy administered. Your patient demands relief from pain.

HAYDEN'S VIBURNUM COMPOUND

has for years enjoyed the confidence of recognized authorities as a dependable remedy in DYSMENORRHEA, MENORRHAGIA, RIGID OS, THREATENED ABORTION and other GYNECOLOGICAL and OBSTETRICAL conditions where indicated.

Administered in hot water, teaspoonful doses, it will, if given a trial, enjoy and retain YOUR confidence.

Formula, literature and sufficient supply for clinical demonstration sent on request.

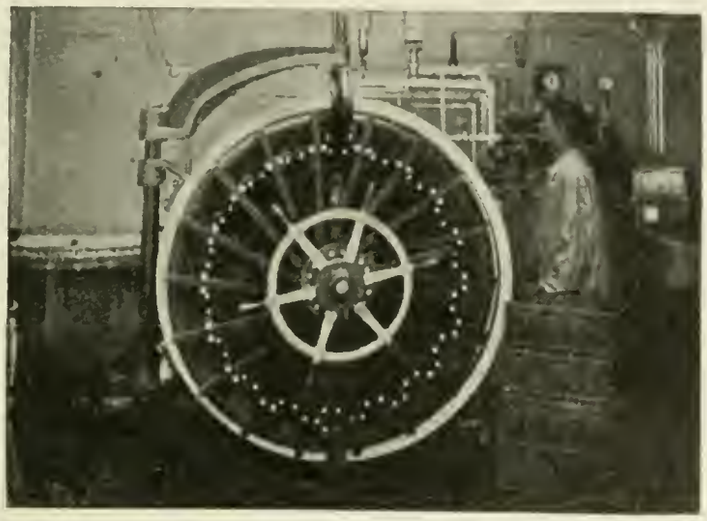
NEW YORK PHARMACEUTICAL CO.,

BEDFORD SPRINGS, BEDFORD, MASS.

RHEUMATISM, GOUT and SKIN MANIFESTATIONS due to faulty elimination, suggests the administration of Hayden's Uric Solvent.

Mulford Ampuls

The Mulford sterile ampul offers a convenient and safe method of administering subcutaneously accurate doses of many potent drugs. The H. K. Mulford Company is particularly well equipped with the laboratory facilities necessary for preparing, sterilizing and testing the solutions for sterility.



Large autoclave for sterilization, with live steam under pressure, of syringes and other containers, and ampuls containing hypodermic solutions.

The Mulford ampuls are of flint insoluble glass with flat bottom and shoulder, insuring easy transfer of solution to the syringe. They are furnished in boxes containing 12 ampuls, except ampuls of Cornutol, Emetine and Quinine and Urea Hydrochloride, which are furnished in boxes of 6 ampuls.

Selected List of Mulford Sterile Ampuls

No.	Name
2	Atropine Sulphate, 0.0006 Gm. (1-100 gr.)
4	Caffeine and Soda Benzoate, 0.25 Gm. (3 3-4 gr.)
5	Caffeine and Soda Benzoate, 0.5 Gm. (7 1-2 gr.)
9	Camphor, 0.1 Gm. (1 1-2 gr.). Oil of Sweet Almond, 1 mil
10	Camphor, 0.2 Gm. (3 gr.). Oil of Sweet Almond, 1 mil
12	Cornutol, 2 mils (c.c.)—vacule ampuls
14	Emetine Hydrochloride, 0.005 Gm. (1-12 gr.)
15	Emetine Hydrochloride, 0.02 Gm. (1-3 gr.)
16	Emetine Hydrochloride, 0.032 Gm. (1-2 gr.)
17	Emetine Hydrochloride, 0.04 Gm. (2-3 gr.)
24	Iodine Solution, 3.5 per cent in 1-mil ampuls. "First Aid Ampuls."
35	Mercuric Chloride Corrosive, 0.01 Gm. (1-6 gr.)
36	Mercuric Chloride Corrosive, 0.0012 Gm. (1-50 gr.)
42	Mercury Succinimide, 0.01 Gm. (1-6 gr.)
43	Morphine Hydrochlor., 0.016 Gm. (1-4 gr.)
44	Morphine Sulphate, 0.01 Gm. (1-6 gr.)
45	Morphine Sulphate, 0.008 Gm. (1-8 gr.)
46	Morphine Sulphate, 0.016 Gm. (1-4 gr.)
47	Morphine and Atropine No. 1. Morphine Sulphate, 0.016 Gm. (1-4 gr.) Atropine Sulphate, 0.0004 Gm. (1-150 gr.)
51	Pituitary Extract, physiologically tested, 1-2 mil (c.c.)
52	Pituitary Extract, physiologically tested, 1 mil (c.c.)
54	Quinine Dihydrochlor., 0.25 Gm. (3 3-4 gr.)
55	Quinine Dihydrochlor., 0.5 Gm. (7 1-2 gr.)
58	Quinine and Urea Hydrochlor., 1 per cent
61	Sodium Cacodylate, 0.1 Gm. (1 1-2 gr.)
62	Sodium Cacodylate, 0.2 Gm. (3 gr.)
64	Sodium Cacodylate, 0.5 Gm. (7 3-4 gr.)

Complete List of Mulford Sterile Ampuls on Request

MULFORD FOR THE CONSERVATION OF LIFE LABORATORIES

H. K. Mulford Company

Manufacturing and Biological Chemists

Philadelphia, U. S. A.

26105

MULFORD FOR THE CONSERVATION OF LIFE LABORATORIES

believed to be necessary for its normal function, and many times the internal and local applications of iodine have been found of use in affections of the thyroid in which the function of this organ was apparently interfered with. A preparation of this drug that appears to have a selective action upon the thyroid gland is offered by Henry K. Wampole & Co., Inc., Philadelphia, in the form of Organidin, which is claimed to give iodine results without the usual iodine disturbances.

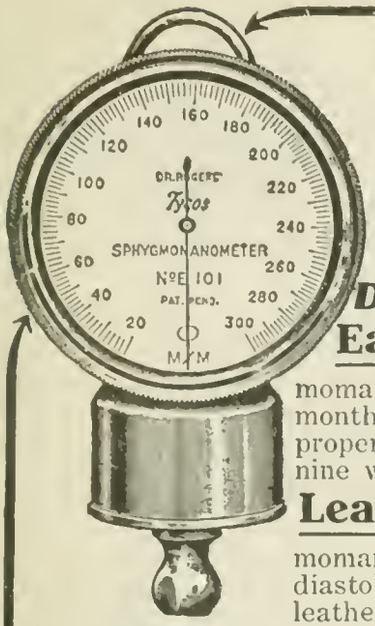
The automobile, the motorcycle—and the Ford have brought about a great many changes in the life of the country physician, making it possible for him to complete his rounds with greater ease and with less fatigue—provided that the roads are in reasonable condition. Of course, we are quite aware that a great many cars are said to go anywhere at all. At the same time, we remember occurrences and contingencies in which no horseless vehicle could have served, where even a team-drawn buggy was useless and where only a two-wheeler with a reliable "plug" in the shafts managed to get us to where we had to go. In spite of all advantages and superiorities of modern vehicles, the old cart still is a mighty dependable means of conveyance, and we know of no better than the Hammock Cart, made by The Eureka Co., of Rock Falls, Illinois. For certain times in the year, and on certain roads, there is nothing that will take its place, and no matter whether you have team, automobile or what not, Doctor, one of these Hammock Carts with a reasonably good and sturdy horse will fill the bill many times in the case of urgent need.

"Blood is a most peculiar juice". This saying of Mephisto (Goethe's Faust) expresses the opinion held by naturalists and more particularly by physicians since time immemorial. This strange liquid coursing through the blood vessels, evidently maintaining life, and ceasing in its passage with death, aroused the curiosity and desire to study on the part of the physicians of old, and has maintained its claim to their interest to the present day. Blood is life, as the Scriptures have it. The most modern biological studies have resulted in uncovering the most marvelous provisions by which the living body may defend itself against injury and may restore health, in the degree in which it, the blood, can be maintained in or brought to the normal condition.

Long investigations of Dr. E. B. Witte, a New Jersey physician, have shown that many conditions can be corrected by restoring the blood to as near its normal state as possible, and resulted in the elaboration of a fluid that would so closely approximate normal blood in its essential chemical characteristics that when introduced into the circulation it would bring the blood nearer to the condition in which it exists in health. This fluid, Hemo-Therapin, is offered to the medical profession for intravenous administration. Beyond a doubt, the literature is highly interesting, and it may be worth your while, Doctor, to obtain information on this substance from The Hemo-Therapin Laboratories, 505 Fifth Avenue, New York City.

In the treatment of spinal curvature, spinal tuberculosis, irritable spine, in cases of sacro-iliac dislocations, etc, it is necessary to immobilize the spinal column as completely as is possible in order to give the affected vertebrae or other bones the necessary rest and also the support needed to prevent or to correct misplacement.

Many times it is difficult and even impossible or not



Rent This TYCOS Nine Months Then It's YOURS!

Dr. Rogers' Self-verifying Sphygmomanometer

Easy Rental Purchase Plan The cash price of the Tycos, Dr. Rogers' Sphygmomanometer, everywhere is $25.00. We will rent it to you for nine months at $2.50 a month and at the end of that time it is your absolute property. You pay only the cash price (no interest—no extras) and have nine whole full months in which to make it pay for itself.

Leather Case and Booklet Free The celebrated genuine Dr. Rogers' Sphygmomanometer is very accurately made and registers both systolic and diastolic pressures. With every Tycos is included **Free** a genuine morocco leather case. You can put your Tycos into this case and carry the entire instrument in your pocket. Besides the case we give you **Free** a 44-page booklet which explains accurately, thoroughly and plainly just how and why the Sphygmomanometer is essential to the intelligent practice of medicine.

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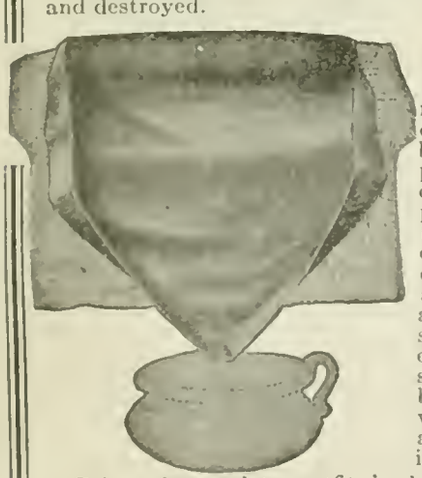

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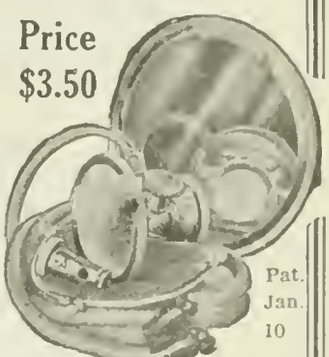

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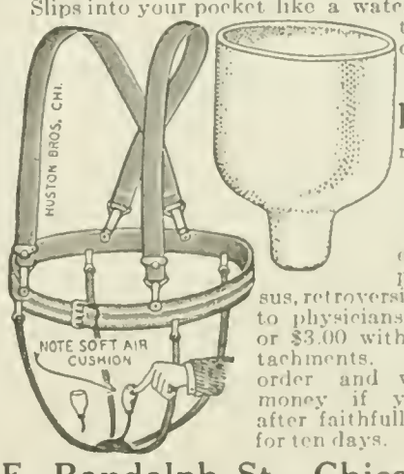

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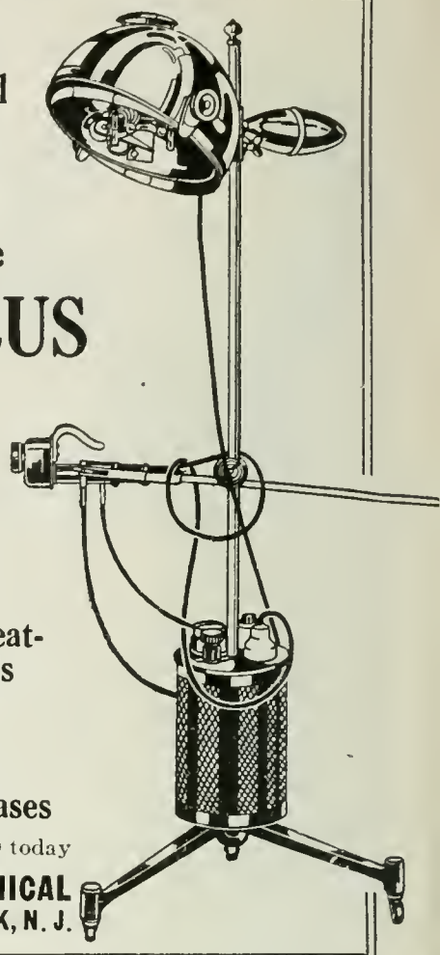

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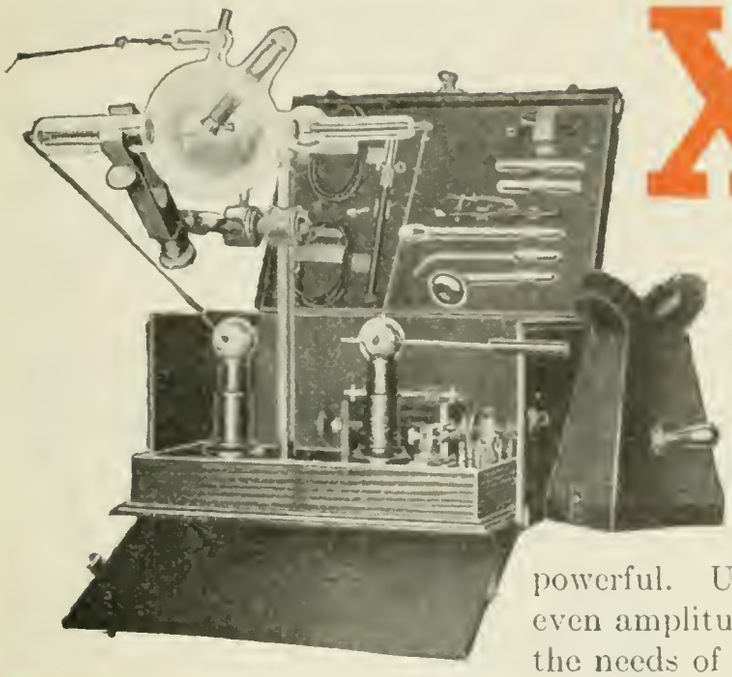

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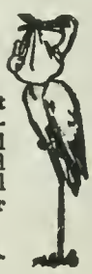

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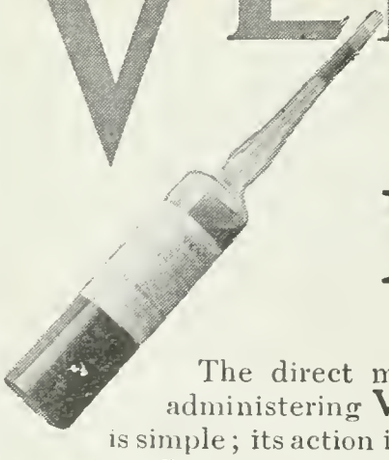

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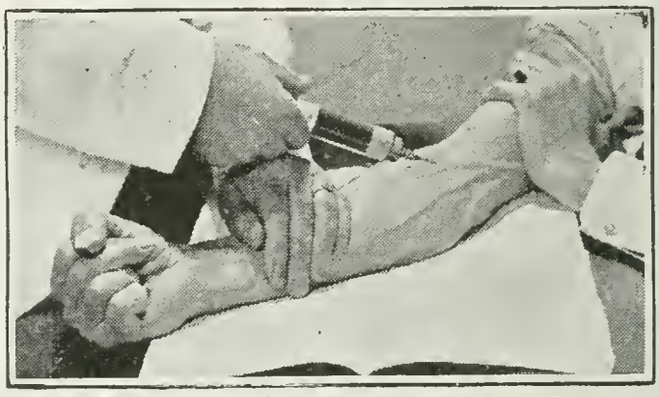

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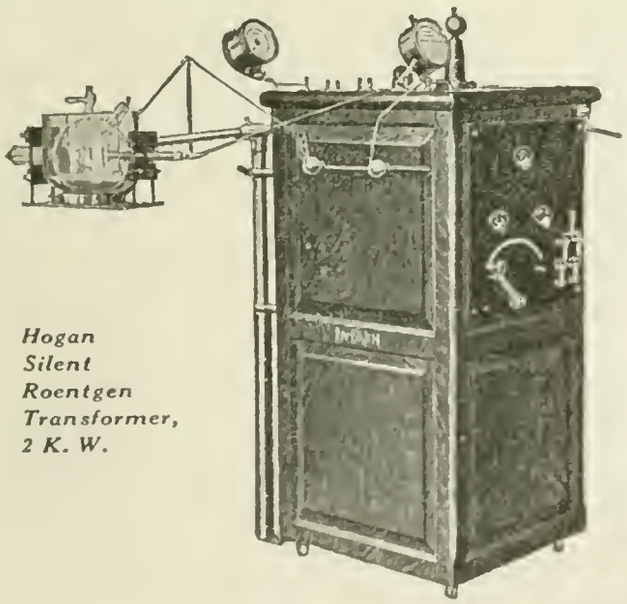

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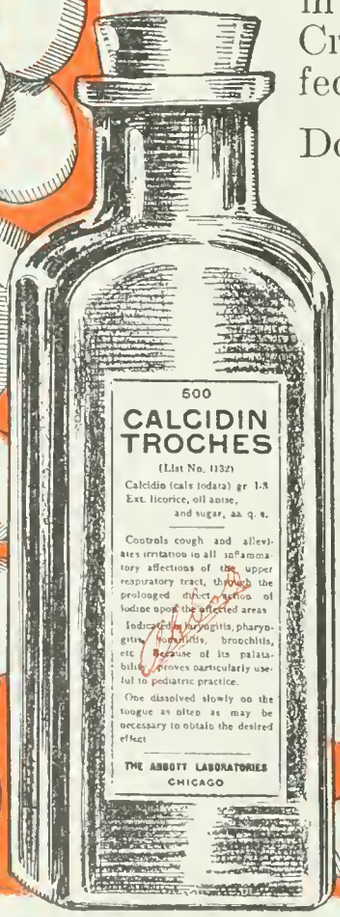
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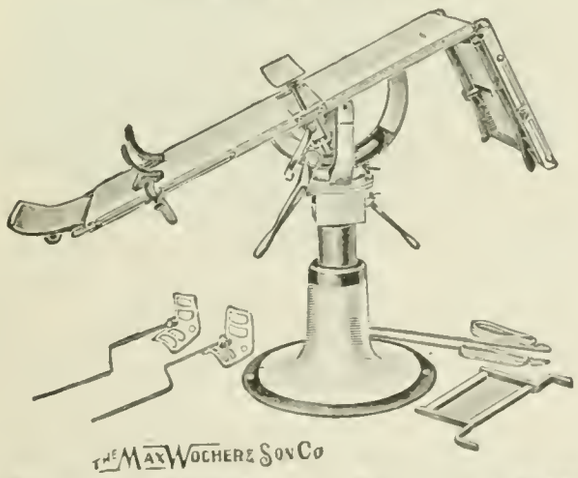

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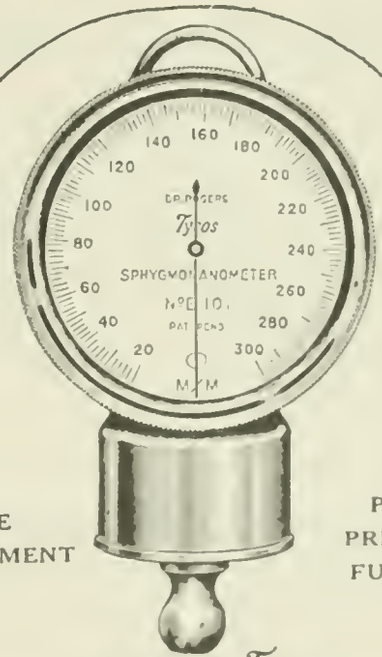

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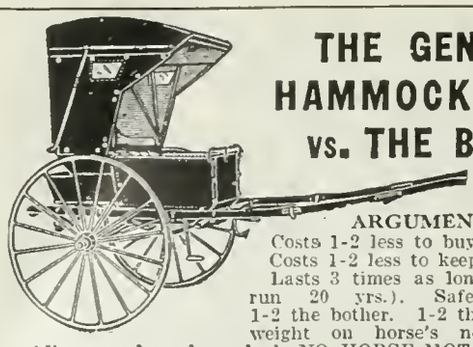

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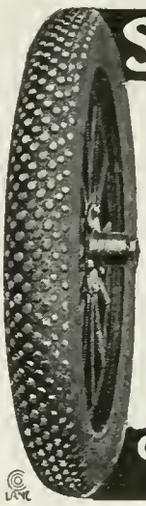

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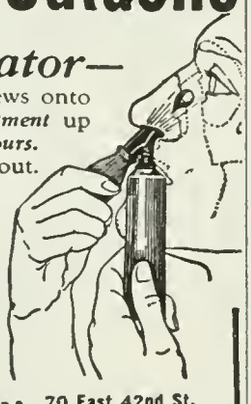

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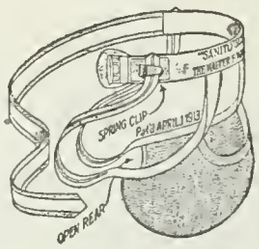

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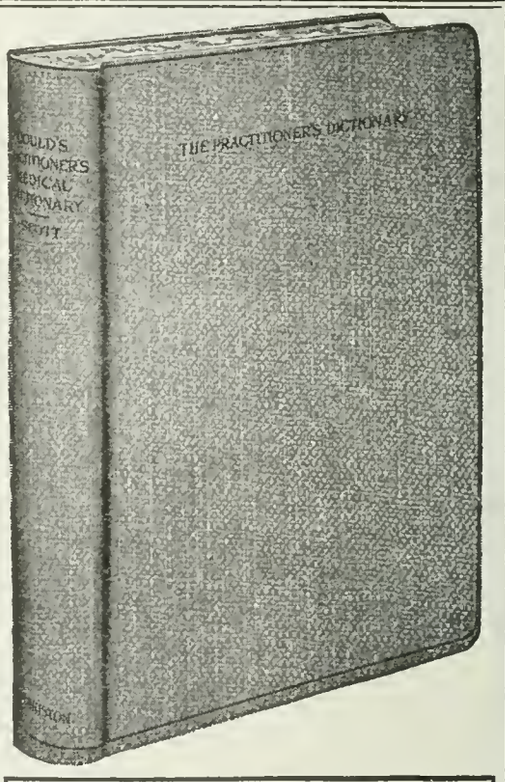

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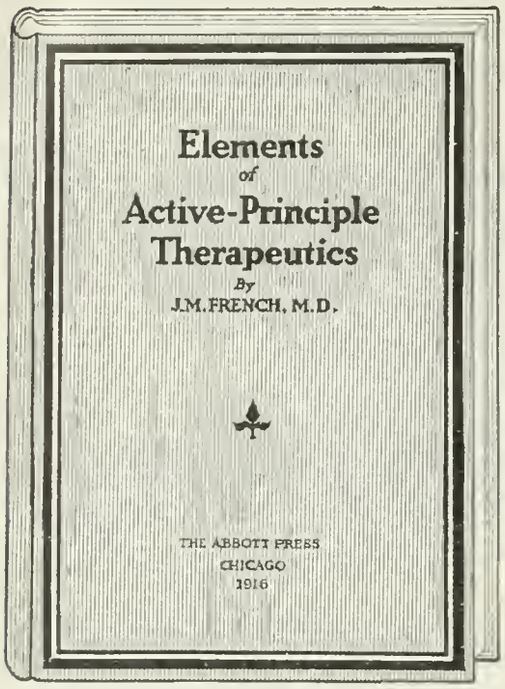

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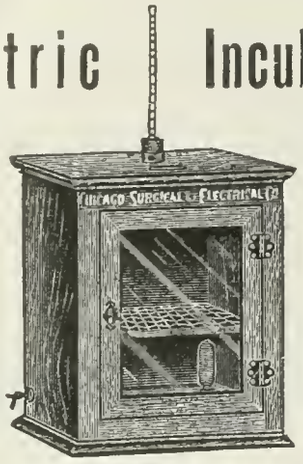

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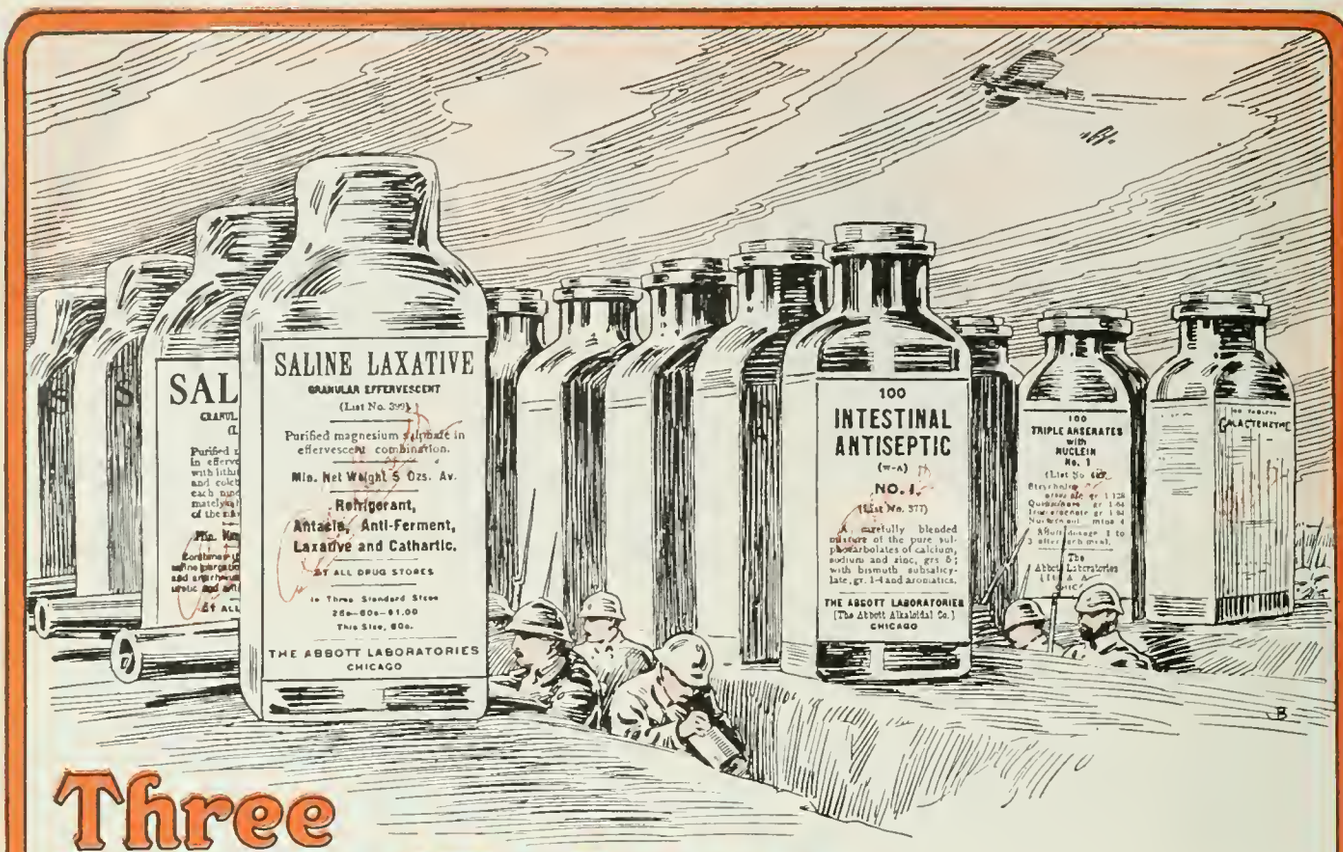

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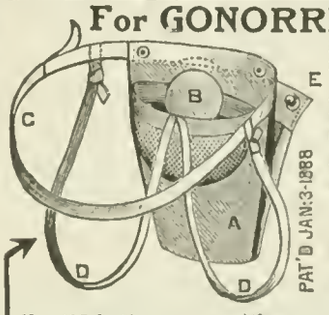

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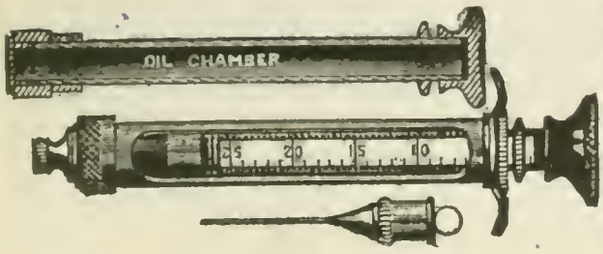

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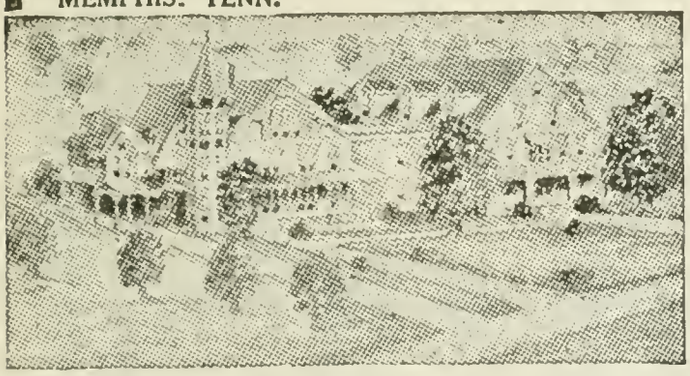

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readily becomes a chronic condition since the toxemic patient lacks that initiative which is necessary to active physical exercise; thus ***cause*** and ***effect*** form a circle which must be broken by rational therapeutic treatment while proper hygienic conditions are being re-established.

Cystogen-Aperient

(Granular Effervescent Salt)

performs a ***double service*** by stimulating to normal function and by disinfecting the intestinal and urinary tracts.

Specially Indicated in the Treatment of Gouty Conditions and Auto-Intoxication of Self-Poisoning Diseases Such as Pellagra, Typhoid, Etc.

Cystogen-Aperient is not presented as a saline purgative, but as a rational therapeutic aid wherever treatment is based on elimination; it combines the ***laxative*** and ***tonic*** properties of Sodium Phosphate and Tartrate with the ***diuretic urinary-antiseptic*** and ***solvent*** action of Cystogen ($C_6H_{12}N_4$).

FORMULA: A teaspoonful contains { Cystogen gr. V. Sod. Phos. gr. XXX. Sod. Tart. gr. XXV.

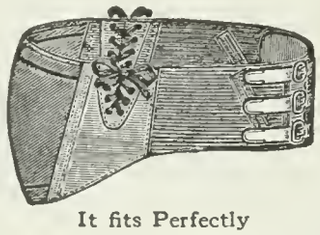
DOSE: A teaspoonful in a glass of water t. i. d.

Samples on request.

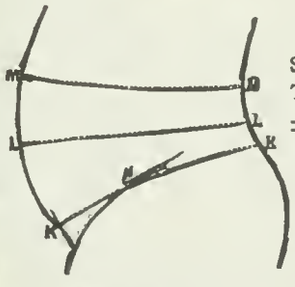
CYSTOGEN CHEMICAL CO.
515 Olive Street St. Louis, U. S. A.

POMEROY
SPECIAL SUPPORTING BELTS

The POMEROY "Special" is one of the most popular abdominal belts made. Its superior supporting qualities are recognized by physicians at a glance.



It fits Perfectly



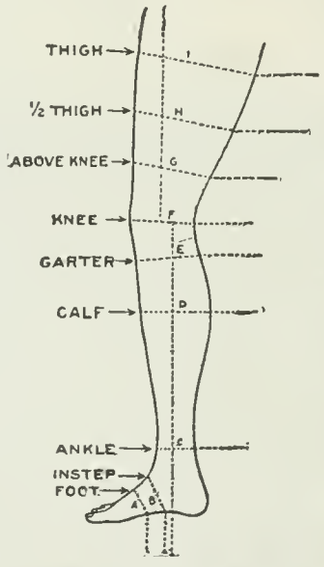
Physicians' Net Prices

SILK..... $3.00 net
THREAD ..... $2.25 net

Mailed on receipt of price and abdominal measurement. Write today for complete catalogue of Surgical Appliances.

Made by POMEROY
16 E. 42d Street NEW YORK CITY

"MASTER"
ELASTIC STOCKING



Physicians' Net Prices

Garter Stocking, A to E
Heavy Silk.....$3.56
Fine Silk..... 3.00
Thread 1.88
Garter Legging, C to E
Heavy Silk.....$2.62
Fine Silk..... 2.25
Thread 1.65
Knee Stocking, A to G
Heavy Silk $5.62
Fine Silk..... 4.87
Thread..... 3.37
Knee Leggings, C to G
Heavy Silk.....$4.69
Fine Silk..... 4.12
Thread..... 3.15
Knee Caps and Anklets
Heavy Silk.....$2.25
Fine Silk..... 2.06
Thread..... 1.57

On receipt of price we deliver the goods by mail.

It pulls on like a boot

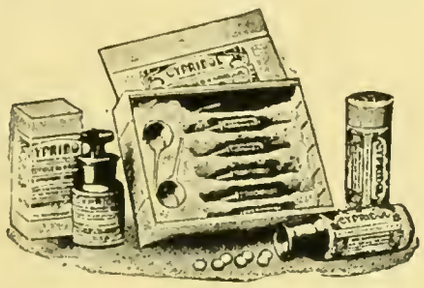
POMEROY COMPANY
16 E. 42d Street
NEW YORK

MERCURY supplements the arsenical cure of **LUES.**
Selection of a preparation convenient, and well tolerated, is important.

CYPRIDOL

a 1% oily solution of mercuric iodide has these advantages. Administered by the mouth in capsules (20 centigrammes each), dose, two or three capsules with each meal, or by intramuscular injections, dose, 1 to 2 c. c.

Intramuscular Cypridol injections do not occasion hard nodules or abscesses like insoluble salts of mercury



Cypridol in ampoules for one injection
or in 1 oz. bottles;
for internal administration, in bottles of 50 capsules.

Samples and literature on application to the

U. S. Agents, **E. FOUGERA & CO., Inc.**
New York

Morrhuol Créosoté

(Chapoteaut)

INDICATIONS: Wherever Cod Liver Oil and Creosote are prescribed.

Cod Liver Oil contains *Vitamines* and these have been separated by Chapoteaut of Paris in the form known as Morrhuol (Extractum Morrhuae Alcoholicum), representing the vitamines morrhuine, nicomorrhuine, amylamine, dihydrolutidine, oxycollodione, aselline and morrhuic acid.

Each capsule of Morrhuol Créosoté contains.

℞ Morrhuol ....20 centigrammes
Creosote (beechwood) .... 5 centigrammes

DOSE: Four to eight capsules daily

Write for literature and samples to the U. S. Agents

E. FOUGERA & CO., Inc., New York

INVALID ROLLING CHAIRS

The only line sold direct by the manufacturer. Satisfaction guaranteed or your money cheerfully refunded.

Popular Reclining Chair

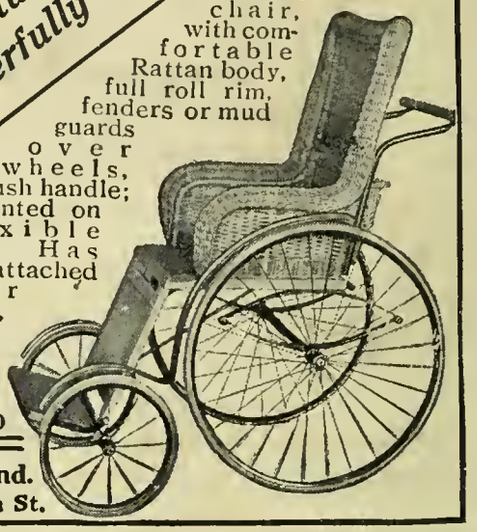
The frame is of selected oak, back, seat and leg rest being filled with closely woven cane webbing. All positions can be obtained. Hand rims furnished except when self-propelling attachment is ordered.

Self-Propelling attachment as shown $7.50 extra.

15X204. Steel rim wheels **$14.85**
15X205. ¾ inch Rubber tire wheels..... **$21.75**
15X207. 1 inch cushion tires, ball. bearing..... **$28.50**

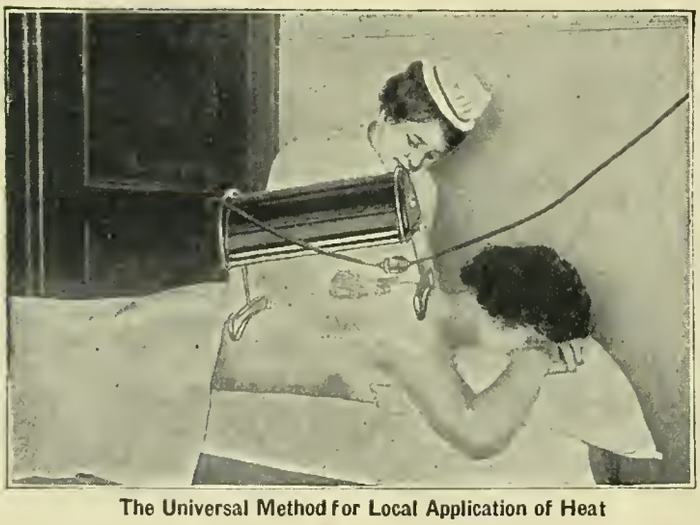
World's Fair Model

A popular outdoor chair, with comfortable Rattan body, full roll rim, fenders or mud guards over wheels, push handle; mounted on flexible springs. Has basket attached to back for holding books, parcels, etc.



15X273. ¾ inch cushion tire wheels..... **$26.40**
15X275. 1 inch cushion tires, ball-bearing..... **$35.50**

FRANK S. BETZ, Hammond, Ind.
Chicago Sales Dept., 30 E. Randolph St.



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